Montana Outdoors

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WILDERNESS
What is it? Is it good for wildlife?

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THE COVER: Mention the word, "wilderness," and you have a debate. One reason for so much controversy is different personal philosophies on its definition. On page 18, Michael Frome attempts to answer the question, "What is Wilderness?" On page 2, Tom Hay and Jim Posewitz wrestle with an equally difficult question: How does wilderness designation affect outdoor recreation, wildlife management and the animals themselves, such as the bighorn sheep pictured on the front cover? Front cover photo: Bill McRae; back cover graphics: Takehiro Taira

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The Director's Column

Readers of this issue of *Montana Outdoors* will draw the legitimate conclusion that the Montana Dept. of Fish and Game strongly supports the concept of wilderness as a resource and as an important use of wild land in our state. Wildlife scientists and agencies have a great affinity for the natural world; one of the biggest challenges we face is protection and preservation of wild habitats. In fact, some of the animals with which we are concerned cannot prosper or even exist unless some land areas remain in a wild condition.

However, while it is fair to say we love wilderness (i.e., land that has been subjected to minimal development), we cannot be considered as unequivocal supporters of wilderness classification (as defined by the Wilderness Act of 1964) for all or even a major part of the remaining roadless areas in Montana. The wildness that we value can be preserved in other ways besides dedicating the land as part of the National Wilderness Preservation System; some of these alternative methods may better serve the wildlife resource.

The fact is that wilderness management, as practiced by the Forest Service (FS) in Montana in legally established wilderness areas, is not consistent with intensive wildlife management. Exclusion of fire from wilderness areas promotes ecological succession toward a climax condition which does not produce optimum populations of game animals. The total prohibition against mechanized equipment in classified wilderness areas makes it impossible for us to utilize such standard wildlife techniques as range condition surveys, fish stocking, animal transplants, etc.

If the alternative to wilderness classification is complete development—e.g., a full road system, extensive logging, mining, subdivisions, etc.—then we will opt for wilderness status. This may not give us maximum opportunity for wildlife management, but it protects the wildness that is so important to us.

But in many cases, we would prefer some other land use classification that would keep the land in a near-wild condition while providing greater management opportunities. This alternate classification, which many people are labeling "backcountry," is gaining in popularity with many land management agencies, including the FS and the Bureau of Land Management (BLM). At a recent meeting of the Western Assn. of Fish and Wildlife Agencies (a regional organization composed of administrators of wildlife agencies and their overseeing commissioners), a resolution endorsing backcountry as an alternative to wilderness was passed unanimously.

The beauty of the backcountry concept is that it not only better serves wildlife management and many other users of wild lands, but it also serves as a means of protecting the quality and purity of the wilderness system itself. It avoids the necessity of putting marginal areas into the wilderness system and removes some of the undesirable use pressure from wilderness areas.

Many persons are concerned that backcountry is not legislatively protected, that the backcountry alternative is not as available as are the other two alternatives—full development and official wilderness classification. Both the BLM and the FS have designated backcountry areas. But these are administrative areas which lack the full, statutory protection of wilderness, as designated by Congress. Thus, these areas can be declassified more easily, and then developed, than a wilderness area could. To administratively declassify a backcountry area, a federal agency must go through a public review process. However, to declassify and develop a wilderness area, Congress would have to pass legislation.

The answer to this is, of course, national legislation with backcountry an equal (as defined by law) alternative to wilderness. There is a legislative movement afoot to accomplish this. For now, however, backcountry—with its less stringent regulations—can only be established administratively.

I hope these comments will not be misunderstood. The Montana Dept. of Fish and Game is a strong believer in wilderness and we will continue to support inclusion of certain areas into the National Wilderness Preservation System. But we regard wilderness as only one point on the land use spectrum. And in many situations, the wildlife resource will be best served by a nonwilderness designation.

Robert F. Wambach

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Wilderness and Wildlife

by Tom Hay and Jim Posewitz

THE NIGHT WAS INK BLACK and moonless. Through the rarified air, the star-choked sky seemed close enough to reach from the mountain peaks surrounding the alpine basin. The sight and silence were undiluted. No yard lights or neon compromised the darkness. No whine of wheels or grind of engines diminished the stillness.

The man in the sleeping bag slept restlessly. His camp was primitive—a small bough and pole lean-to, no fire. He knew, even as he slept, that he must sense the first gray light of dawn.

In time, the eastern sky began to yield to the new day as streaks of gray and gold swelled up on the horizon. The restless hunter stirred and methodically dressed for the day. This morning he would again have to do without the companionship and warmth of a friendly fire. The man sought

"Today, we debate the fate of this nation's last wild and undeveloped fragments of land. Wildlife is selected as beneficiary by advocates on each side of wilderness debates."

to disguise even his mere presence in the basin he would now prowl. He moved in dawn's half light, as much to warm his body as to patrol the low ridge he selected for his hunt. He took his breakfast of dried fruit as he walked; the luxury of a cup of coffee would have required fire and smoke—it had to be foregone.

The hunter's steady pace halted without warning, apparently without reason. He knew, as though guided by a strange instinct, that it was coming and he grinned slightly as it came rolling across the ridges, reverberating against the peaks, piercing the gray dawn like a surgeon's scalpel and finally fading as though absorbed by the thickets of spruce and fir. It was the shrill, whistling bugle of the challenging bull elk. The bugle announced once again the season of mating for the elk, as it had back into time measured only by the evolution of the species. It announced to the hunter that the pursuit was on, and for the hunter, it severed every bond, every thought, every nagging memory and worry. The world for now was small, manageable and simple—one man, one elk and nothing else. For the time being, war, peace, energy, recession, inflation, Dow Jones and Idi Amin were all relegated to the status of nonexistent.

The hunter answered the bull's challenge with his own imitation, and the tension began to build. Was it good enough, loud enough, bold enough? Would the elk answer or drift away? Had the bull really heard the imitator? Had the hunter heard the bull or just imagined him? Doubt and silence both hung heavy on the ridge.

The bull responded, and from the moment the bugling call swelled up out of the valley, the hunter knew he would have his opportunity. The bull was on the move and on the fight. Quickly surveying his situation, the hunter decided to leave the ridge. Perhaps if he had a rifle, he could take the bull on the open ridge, but with his bow it would have to be more intimate. Quickly he selected the alder thicket on the soggy valley floor for his advantage, and left the ridge to take up his new position. Upon reaching it, the hunter again taunted the elk and fell silent, melting into the alder until he and the thicket were one. The bull topped the ridge just abandoned by the hunter when he heard the taunt sent his way from the thicket. The elk paused and swung his ivory-tipped rack from side to side in mock battle with his elusive adversary. The first rays of morning sun caught the bull broadside and sparkled off the ivory-polished antler tips as they fought the crisp air and frosted juniper along the ridge.

The hunter's body was now motionless, beads of sweat formed on his forehead, his chest was hot and his heart pounded almost frantically. His whole body and consciousness were honed and alive, yet only his eyes moved, following the steaming bull down the slope, as the bull approached the thicket. The animal challenged again; the hunter remained motionless and silent. The frustrated bull now raked and sparred the alders at the thicket's edge. Twenty yards now with only a few saplings to obscure the target or deflect the arrow. The hunter slowly, almost painfully, raised the bow, his motion so slow as to be imperceptible.

The bow slowly bent as the archer's powerful arms strained against string and bow. Inch by inch, the arrow slid silently backward over the archer's grip on the bow. The hunter's eyes, unblinking, were focused on the big bull's chest as he slowly moved along the edge of the thicket in search of his adversary. Just one more step....

The hunter released the arrow and it began its flight through the alder. Time was frozen during the instant the arrow flashed toward the bull elk. On the flight of the arrow was focused the life of the hunter—the hours of practice to become proficient with the bow, the miles and endless miles of running to acquire the stamina for the hunt, the exercises and barbells used to strengthen and steady the grip on the bow and string, the entire lifetime of observing wildlife and learning its habits.

WHETHER THE HUNTER'S ARROW found its mark or whether an alder twig intervened to favor the elk is unimportant. The important thing is that the elk existed and that the hunter had the opportunity to pursue him. It is this opportunity to hunt in the setting and manner described that is an integral part of the question of wilderness and wildlife. The opportunity to experience an early hunt for elk during their rutting season is rapidly becoming the exclusive domain of the archer. The chance for rifle hunters to participate—and maybe someday in the future for even archers to participate—lessens as our wild land decreases.

As wild lands diminish, security for wildlife is provided by regulation and restriction. Institutional protection is substituted for the natural protection the habitat once provided. What this means to the hunter is that in order to compensate for wild lands being developed, he will be denied some of the opportunities to hunt that he was previously afforded. In-

stead of regulating those who exploit our remnants of wild land, sportsmen seeking outdoor recreation are being burdened with growing regulation and diminished opportunity.

With careful management, almost all species of wildlife will, most likely, be preserved through the foreseeable future. Some species will be favored over others, but hopefully, none will be forgotten.

What is apt to be forgotten is the hunter and the opportunities that can be made available to him. Already, the opportunities do not lie in his hands alone. It is no longer his decision whether or not to prepare himself for the physical and mental demands of his chosen form of recreation. In many instances, he must first ask our Dept. of Fish and Game computer if it is okay, i.e., if he will receive the desired permit. The computer knows nothing of the hunter—only his number and the type and number of animals that wildlife managers have determined are available for harvest. The computer is not evil in itself. It is simply a space-age substitute for an old fir thicket that, before it was clearcut, protected elk. The computer and swelling regulation now shield elk previously protected by undeveloped wild land.

Today, we debate the fate of this nation's last wild and undeveloped fragments of land. Wildlife is selected as beneficiary by advocates on each side of wilderness debates. Those who argue that we should develop wild lands claim wildlife benefits, as do those who argue we should preserve wild land through wilderness classification.

Wilderness is an issue that splits organizations, dissolves friendships and demands complete compliance, be it pro or con. The middle ground is a battleground. The middle ground is not accepted, it is not tolerated and, unlike politics, you attract no friends when you choose it. To be accepted in either camp, you must endorse the general philosophies of that camp rather than weighing the merits of the specific issue at hand.

We find the rules of this game intolerable. Therefore, we have chosen a path that we feel allows us to meet our responsibilities to Montanans and the dictates of our conscience. We have chosen the battleground and will make recommendations on each specific wilderness proposal according to the way we feel that proposal will affect the resource entrusted to our care.

The statement that wilderness is good for wildlife is no more true or false than is the statement that timber harvest is good for wildlife. Because the habitat requirements of the multitude of animals termed "wildlife" are so diverse, there is no question that some species will benefit and some species will be injured by either option.

Be it right or wrong, man has not placed the same value on all forms of wildlife. Through the pressure of public opinion, as well as legislative mandate, wildlife has been grouped according to the relative values assigned it. In the center of the spectrum is a group that neither inspires nor antagonizes the majority of the public. It exists with relatively little controversy; it is not a target for control programs, nor a designated beneficiary of assistance programs.

At one extremity of the spectrum are those animals that have been given negative values. The public has determined that these animals are either in competition with us or are a direct threat to us. Many programs have been initiated, including plans for extermination, to cope with this real or imagined threat.

At the other end of the spectrum are animals that have been determined to be worthy of our affection and assistance. They have gained this status because of scarcity, beauty or because of some special value that has caused them to be categorized as game animals.

As employes of the Dept. of Fish and Game, we must accept those values assigned to the various categories of wildlife, both game and nongame, by the legislature and by the public which employs us. We take that course of action which we feel will benefit those species designated for special favor. We have, at times, stood in defense of wildlife otherwise regarded as vermin, but the vast bulk of our resources and energy flows to the favored species. Each specific wilderness proposal will be examined and its impact on these species will be an important part of our deliberations.

THE BASIC NEEDS of wildlife can be classified in four broad categories: food, cover, water and space. They must occur in rather specific arrangements and proportions to meet the needs of any given wildlife species. To further complicate the issue, the kinds and amounts of these necessities needed will change seasonally. Considering the vast array of wildlife species—ranging from large mammalian herbivores like moose to small avians like the hummingbird—a multitude of different habitat situations must exist to meet the varied needs.

Wildlife is a product of the land; it is affected by and responds to vegetative succession. With each plant community in the sequence, there is a corresponding

"The world for now was small, manageable and simple—one man, one elk and nothing else."

association of wildlife species that flourishes. As one community of vegetation is replaced by another in the successional sequence, corresponding changes in the wildlife community occur. Some wildlife species will adapt to the new conditions and thrive as a population; others that cannot cope with the new environment dwindle to a remnant status or disappear from that area. This continual change in plant and animal communities progresses toward a final arrangement that is referred to as a "climax" condition. The climax vegetation condition is characterized by a relatively homogeneous situation lacking the variety found in the lower stages. It may support a few species of wildlife in abundance, but the majority will exist in a marginal status.

A majority of the wildlife species that we favor thrive best in early to mid-successional stages. In the absence of wild fire, timber harvest or similar forces that would maintain habitat in a condition favorable to the preferred wildlife species, we would realize a brief period of high populations followed by years of relatively low density.

A mosaic of vegetation conditions supports the greatest variety of wildlife. Under a managed condition, we can attempt to establish the diversity of habitat that will support an abundant array of wildlife. Under a wilderness option, fire could restore a mosaic if it were allowed to operate. In certain situations, timber management also has the potential to create and maintain an arrangement of food, cover and water that will support a greater variety of wildlife. In addition to supporting a variety of species, there is the option of manipulating habitat for the benefit of desired species. The welfare of wildlife is limited only by our ignorance of its needs or by the land managers' difficulty in implementing the needed practices, both in wilderness and on developed land.

In fairness, the present land allocation process of multiple-use management provides some good examples. The 17-mile drainage northwest of Libby has supported a good moose population in past years. The land management plan for this area now directs that any vegetative manipulation be done solely to benefit the moose population.

Perhaps the best example is the Spotted Bear River Habitat Management Unit. In this forested area of 1,034,000 acres, the primary management guidelines are based on needs of elk. All activities in the Spotted Bear unit will be designed and conducted to maintain and/or improve the arrangements of food, cover, water and space for elk. We believe this to be a "first," in which wildlife—particularly elk—have been declared the most significant resource value on a large area.

Multiple-use land management does not preclude wild land allocations. Some roadless areas possess such outstanding or unique values that they should be preserved and designated "wilderness." These will pass the test on their own merit, needing no erroneous claims of wildlife benefits as a crutch. The majority of wildlife will benefit from the diversity of habitat that is a potential of—or can be a reality of—either multiple-use management or proper wilderness management. Unfortunately, timber management has a record of insensitivity to wildlife's needs. The option to have wild fire restore the mosaic of wildlife habitat conditions in wilderness areas is being frustrated by Forest Service (FS) policy.

A recent memorandum from Assistant Secretary of Agriculture M. Rupert Cutler to the chief of the FS lays down some guidelines on wilderness management. One guideline states there shall be no manipulation of vegetation for watershed, wildlife or forage purposes. This statement is ironic, considering the fire control fervor that persists within the FS. Fire control is manipulating vegetation just as certainly as is prescribed burning. Manipulation of habitat is certainly a tool of the wildlife manager. However, it is a tool that must be used with discretion and sensitivity.

In the battle for wilderness, the word "quality" has been used to define some special aesthetic or intangible value. The definition of "quality recreation" may forever defy any sort of consensus. Nonetheless, that does not preclude its existence—at least as it is perceived by individual participants in the pursuit of fish, wildlife or primitive recreation. Here again, hunting wildlife in wild country is becoming a rare opportunity.

In the first chapter of his classic, "Game Management," Aldo Leopold wrote, "The definition of game management which opens this chapter specifies *wild* game for *recreational use*. The purpose of attaching these specifications is to introduce, at the onset, a qualitative, as well as a quantitative criterion of what constitutes successful practice. The production of tame game for use as meat is animal husbandry. Its harvesting is hardly recreation." A later chapter on aesthetics asserts that "*...recreational value of game is inverse to the artificiality of its origin, and hence in a broad way to the degree of control exercised in its production*" (emphasis added).

"There are all degrees of control," Leopold wrote. "What degree represents the best compromise between quantity and quality is a perplexing problem in aesthetics and social engineering. It seems reasonable to accept some moderate degree of control, rather than to lose species, or to suffer the restriction of sport to those financially able to follow the wholly wild game of the shrinking frontier into other lands."

Today, we stand at the end of those "...other lands." One can only wonder what a man who wrote of a "shrinking frontier" in 1933 would observe and comment on in 1978. These lines written by Leopold 45 years ago are as applicable today as the day they were laid down. Valid principles are like that—they have a way of lasting. Further, according to Leopold, there is a "social significance of game management."

He wrote, "The game manager manipulates animals and vegetation to produce a game crop. This, however, is only a superficial indication of his social significance. What he really labors for is to bring about a new attitude toward the land.

"If we are, indeed, dedicated to preserving the sport of hunting, we must be as dedicated to preserving the hunt as we are to maintaining the harvest."

"The economic determinist regards the land as a food factory. Though he sings 'America' with patriotic gusto, he concedes any factory the right to be as ugly as need be, provided only it be efficient.

"There is another faction which regards economic productivity as an unpleasant necessity, to be kept, like a kitchen, out of sight. Any encroachment on the 'parlor' of scenic beauty is quickly resented, sometimes in the name of conservation.

"There is a third, and still smaller, minority with which game management, by its very essence, is inevitably aligned. It denies that kitchens or factories need be ugly, or farms lifeless, in order to be efficient.

"Herein lies the social significance of game management. It promulgates no doctrine, it simply asks for land and the chance to show that farm, forest and wildlife products can be grown on it, to the mutual advantage of each other, of the landowner and of the public," Leopold concluded.

Reaction to recent, rapid population growth and economic development has brought about a heightened environmental awareness. This reaction has resulted in adoption of such legislation as the National Environmental Policy Act and the Wilderness Act. Superficially, it would seem the game manager would wholly endorse such legislation. Certainly, he empathizes with the growing environmental awareness and concern for the land. Yet, implementation of such legislation often leaves him less than satisfied.

ANOTHER ASPECT that now must enter the debate over wild lands is the preservation of sport hunting itself. Criticism leveled at the killing of game animals has been growing and persists. Those who challenge the hunter have never followed the archer to the alder thicket. They have not experienced the exhilaration of his pursuit nor developed a comprehension of wild land and wild things comparable to his. Instead, they follow shooters to the firing line and record the pursuit of animal carcasses with CB's and four-wheelers.

If we are, indeed, dedicated to preserving the sport of hunting, we must be as dedicated to preserving the hunt as we are to maintaining the harvest. Sending carefully permitted, tightly regulated shooters in pursuit of vulnerable animals diminishes the dignity of the hunt. This situation evolves only after we have first stripped the security from the land, i.e., diminished the wildness. When the species we pursue is thus made vulnerable, it follows that its pursuit—hunting—will, in turn, become vulnerable. The battle for the Elkhorn wilderness today may also very well be the battle for elk hunting tomorrow.

As is the case with any debate, we must ask questions that probe for the area of compromise. Can we exploit some resources while we protect others? Can wild lands be maintained without wilderness classification? Is there some way to both utilize and preserve wild land? Can plant succession sequences beneficial to wildlife be a part of wilderness management?

The answer to all these questions is yes. The tragedy is, in reality, that the answer is too often no.

Perhaps here is the heart of the conflict among those who approach wilderness questions from a wildlife perspective. The land managers of our national forests, while having the opportunities to give us the best of both worlds, frequently give wildlife the worst. The slopes of the Bitterroot Mountains are testimony to the ignoring of fish and wildlife values as a part of multiple use. On the other hand, fire in the wilderness continues to be suppressed and all other forms of vegetative manipulation to benefit wildlife remain prohibited—excellent examples of the worst of both worlds. It is almost as if the FS were trying to make the wilderness option undesirable by management directive.

These management questions should not dominate our decisions on wilderness candidate areas. These questions can be resolved in time and, in any case, in less time than it takes to reclaim an area subjected to irreversible changes because it had no protection.

With these perspectives, principles and problems confronting Montana, its wild communities and recreational opportunities, we now face numerous wilderness proposals. Certainly, many aspects and issues were not addressed; that would require volumes. The questions of grizzly bears, wolves, watersheds, oil, uranium, mass recreation and solitude are all involved, along with many other equally valid considerations. Somehow, all these individual considerations wind down to the same conclusion: Wild things and wild land are not separable—diminish one and you diminish the other, either in quantity or quality.

Today, we come to the similar conclusion that under today's strains and constraints, wilderness is often the safest option to preserve Montana's truly wild communities and the quality of man's opportunities related to them. How much wilderness Montana will have will be decided on a site-by-site basis. Each individual proposal's effect on wildlife will, of course, be the key factor in determining the Dept. of Fish and Game's position.■

Using Horses In Mountain Country

by Robert W. Miller

USING SADDLE HORSES and pack strings in the mountains carries on a western tradition of considerable historical significance. Once common throughout the West and the only method of travel in rough country, it has become a source of pleasure and enjoyment for many persons. Increased use of the mountains, not only by horses carrying people, but also by many other recreationists, has created some problems of overuse. Each group must do its utmost to minimize the impact of these problems. Therefore, in order to continue recreational use in the mountains of saddle horses and pack strings, great care must be taken to protect the basic resources of soil, water and plants.

The following material has been prepared as a guide so that horse, mule and donkey users will cause no adverse environmental effects in mountain country. It is hoped it will be of particular benefit to those who have not had extensive experience with horses in the mountains.

PREPARATION FOR PACK TRIPS

• The nonprofessional horse user should use gentle horses properly trained to hobble, picket and stand tied quietly by themselves or with only one other horse.

• An understanding of the behavioral characteristics of each horse taken on a trip is important. For example, ask yourself: (1) Is each horse gentle and reliable under all conditions? Older, quiet animals with good withers usually make better mountain horses than refined, high-spirited animals. (2) Will a horse attempt to go home because its partner has been left there? (3) Is a horse unduly afraid of downed timber or wet, swampy areas? (4) Which horse or horses are natural leaders of the bunch? Mares are usually the leaders. (5) What about use of geldings? Some horsemen will use only geldings in the mountains because they will usually stay in camp better and in general are less trouble. Mares, particularly if they are in heat, can be difficult to hold. If they start home, geldings will follow.

• Extra animals should not be taken on trips because, in many areas, there is a lack of horse feed. All members of a pack trip should be urged to bring as little gear as possible to reduce the number of pack animals.

• Lightweight camp and personal equipment should be used. For short summer trips with a small party, it is possible to carry all necessary equipment and food on each person's saddle horse.

• Horses shod with flat plates and no heel or toe caulks do less ecological damage, particularly while standing tied or picketed. Borium spots on the heels and toe reduce wear of the plates and improve traction in rocky country. On a short trip, where trails are not entirely rock, pack stock with good feet may not need to be shod. Barefooted animals do less damage to soil and plants.

• If the horses going on a trip have not been running together, they should be together for a day or two before the trip.

• Contact a forest or park ranger's office for information on trail conditions, available feed, special regulations, maps and other information. For information on horses, contact a horseman experienced in using horses in the mountains.

• Keep the number of participants and stock to a reasonable amount on any one trip. Forest and park regulations in some areas do not permit more than 25 horses on a trip; fewer are preferable. One pack horse for every two persons should be sufficient for most summer trips.

SELECTING A CAMPGROUND

• Adequate horse feed must be available in the vicinity of the camp or feed must be packed in. Advice concerning grass conditions should be obtained from the local ranger. The amount of feed available for your use will determine the length of stay or the amount of feed packed in. Remember, others may wish to use feed in the same area. Great care must be exercised to avoid overgrazing.

• In many wildernesses, primitive areas and national parks, a camping permit is required and campsites may be designated by the ranger.

• It is preferable to set up camp between the horses' grazing area and the unloading point. If the horses start back, their departure can be more easily detected.

• If it is necessary to have the camp at some distance from where horses graze, check the horses frequently.

• Do not tie, corral or picket horses within 200 feet of any lake, stream, spring or main trail. Avoid camping on lake shores.

Permission to reprint portions of this guide was granted by the Montana Wilderness Assn. It was prepared by the late Robert W. Miller, formerly an associate professor in the Animal and Range Science Dept. at Montana State University in Bozeman. Single copies of the entire booklet cost 75 cents. Multiple copies are available as follows: 2-10, 50 cents each; 11-100, 35 cents each and more than 100, 20 cents each. The booklet can be ordered from the Montana Wilderness Assn., Box 84; Bozeman, MT 59715.—Ed.

CARE OF STOCK IN CAMP

Any time stock is restrained, particularly if they are away from home and their special partners, they can cause considerable damage to trees, plants and soil by pawing and tramping. If proper precautions are taken, most of this type of damage can be prevented.

Tying for Short Periods

- Horses should not be tied to small, green trees; the slightest damage to the bark or roots may severely damage or kill the tree.
- When horses are tied to trees, the tree should be big enough (over eight inches in diameter) to avoid rope damage to the bark.
- At least a 5/8-inch diameter halter rope should be used for tying. Smaller ropes do more bark damage.
- Wherever permanent Forest Service hitch rails are provided, they should be used. A hitch rail can be constructed by *tying,* not *nailing,* a pole between two trees.
- Tie stock near camp only while packing or unpacking. Horse manure and trampling near camp should be avoided.

Tying for Several Hours or Overnight

- If it is necessary to keep stock tied for any length of time, the following should be considered: (1) Use a pole or rope hitch rail at least 200 feet from any water, trail or campsite. (2) Select a site where they cannot tramp on tree roots and where damage to plants will be minimized. Rocky, hard ground is usually best. (3) If an animal is inclined to paw while tied, it can do considerable damage to soils and plants. This type should be hobbled while tied. (4) If some horses are kept tied while others are turned loose to graze at night or in the daytime, it is almost always best to keep two horses tied rather than only one. Two will usually stand more quietly.
- When animals are tied during the day, treat them with fly repellent to reduce the tramping and unrest caused by insects.

Hobbling

- Hobbles are a good device for restraining stock in the mountains. The horse or mule can move enough to graze, but the animal is discouraged from traveling long distances.
- Train your stock to use hobbles *before* going to the mountains. Use *only* the special grazing hobbles with wide leather straps connected by a chain. To avoid injury to the tendons of the leg, place the hobble below the fetlock.
- Place bells on one or more horses to help detect night movements or to locate horses in timber. Buckle bells reasonably snugly around the throat latch of the horse. Bells should not be used when camped near other groups if they would be irritated by the sound.
- In boggy, bushy country, horses could catch their hobbles in roots or downed trees. In this type of country, some horsemen bell all hobbled horses as an aid to locating them should they become caught and unable to get loose.
- Some horses may travel fairly long distances while hobbled. A side line (a short rope run from a half hobble on a front foot to a half hobble on a hind foot) will slow down this type of horse.
- It is usually best to hobble all horses turned loose rather than only a part of the bunch. Unhobbled animals travel more and the hobbled animals will try to keep up with them. This may result in hobble burns from extra movement.

Picketing and Staking

- The horse should be trained to picket *before* going to the mountains.
- Do not leave a horse picketed overnight unless it is well broken to picket and will not cause soil and plant damage. Use a hitch rail for the night if there is any doubt.
- Where available, dry, open, grassy meadows, reasonably level and free of rocks and bushes, are best for picketing. Picketing on a steep slope or near a washout can be dangerous to a horse if it gets tangled in the picket rope. Rocks, bushes and trees will tangle the rope and restrict the horse which may then cause plant and soil damage.
- The horse is less apt to injure itself if picketed by a front foot rather than the halter. A half hobble of leather with a swivel should be placed around the pastern with the picket rope tied to the swivel. A large, soft rope can be tied directly to the pastern with a bowline knot.
- The picket rope should be 30-40 feet long, depending on the size of area used for picketing. The horse should be allowed to graze as large an area as feasible, but should not be picketed within 200 feet of water, campsite or main trail.
- Picket logs should be of a size that can be dragged by the horse with some effort. They should be closely trimmed and free of all limbs. Tie the picket rope in the middle of the log, thus preventing the horse from dragging it as easily. Advantages of picket logs include: (1) The horse is less apt to injure itself because the log will move if the animal becomes tangled or scared. (2) The horse is less apt to get away when tied to a log because, although it will move, it usually hangs up on something before it is dragged very far. (3) It is easy to frequently move a log a short distance to new grass. This reduces the possibility of overgrazing. Disadvantages of picket logs include: The picket rope may wrap around the log, restricting the horse's movement.
- Ropes can be attached to a picket pin or stake with a loose bowline that will turn as the horse moves around the stake. This prevents tangling. Stakes should always be pulled out of the ground when breaking camp to prevent others from using them to picket in the same spot and thus overgrazing. Advantages of the picket pin or stake include: The horse is less apt to get the rope tangled and shortened as it moves around the stake. Disadvantages of the picket pin or stake include: (1) Because some work is involved in pulling and redriving a pin, there is a tendency not to move the pin frequently. (2) The picket pin may pull out and the horse depart for parts unknown. (3) If the horse becomes scared or tangled

in the rope, the pin will have no give, while a log would. The horse is apt to hurt itself, or pull the pin and get away.

- Both stakes and logs must be moved frequently to avoid overgrazing.
- It is best not to picket more than one or two horses; turn the remainder loose with hobbles.
- If the natural leader or leaders of the bunch is known, it works well to picket one or two of them. The rest of the stock tend to stay with the picketed leader.

Grazing and Tying

Some horsemen prefer to graze stock in the evening for three or four hours and again in the morning and tie them to a hitch rail at night. Advantages include: (1) The horse wrangler sleeps better. (2) Horses will not need to be picketed at night. Disadvantages include: (1) If feed is short, it may be difficult to meet the horses' needs unless supplements are used. (2) Restless stock may do considerable pawing and tramping damage.

OTHER CAMP SUGGESTIONS

- Most important, leave an absolutely clean camp. If allowed, burn the burnables. Pack out everything else, including the smallest items: bottle caps, foil, etc.
- If you camp where no one else has camped, leave no sign you were there. If you camp where others have been, leave the camp cleaner than you found it.
- Do not bury anything. It may be dug up and scattered by bears or other scavengers.
- Use established fire rings where available. If a fire ring is not available, dig a fire pit, carefully removing the sod. When leaving, put the fire out with ample water, replace the sod and soak it thoroughly to promote regrowth of plants.
- Use a shovel or rake to scatter all horse manure and smooth over areas where horses have been tied or picketed.
- Feed grain and offer a salt supply to hold horses around a camp.
- Keep horse equipment hung in trees or on logs off the ground to prevent damage by rodents and porcupines.

SAFETY, CONSERVATION AND COURTESY

On the Trail

- Do not drop even the smallest bit of trash on the trail. Pick up any left by others.
- If doubt exists about the safety of an area, examine it on foot. It may be best to lead your horse across.
- Do not allow stock to cut across switchbacks. This causes soil erosion.
- Use well-defined, existing trails; avoid forming new trails.
- Leading rather than loose-herding pack stock aids with the preceding two suggestions. Dally the lead rope of a pack horse around the saddle horn. Tying hard and fast is very dangerous, as is using a loop over the saddle horn.
- If hikers are passed on narrow, steep trails, they should be asked to get off on the lower side of the trail. Standing above the trail can be dangerous to a hiker if he should slip and fall under the horses.
- Extend the same courtesies to everyone you meet in the mountains as you would like to receive from them.

In Camp

- Do not leave stock unattended for more than a few hours, except in the middle of the night. They may become caught in some way and injure themselves or do considerable ecological damage. Check all horses just before dark and early in the morning.
- Do not leave halters on shod horses when they are picketed or grazing. If they should try to scratch their heads with a hind foot, the shoe can become caught in the halter and the horse will be in real trouble.
- When tying a horse, always use a knot that can be easily untied such as a slip knot, slip bowline or clove hitch. When tying to trees, be certain the rope cannot slip down the tree.
- If horses are tied at night to a hitch rail, they may want to lie down. The length of the rope from the halter to the hitch rail should be the same length as the height of the rail from the ground.
- When tying a rope around a horse's neck or foot, use a knot that will not slip; the bowline is best.
- Take a veterinary first aid kit for treatment of such minor injuries as saddle sores and cinch galls. Consult your veterinarian for advice on what to include. On summer trips, include a good fly repellent.

FEEDING HORSES IN THE MOUNTAINS

Average-sized horses and mules used for hard daily riding and packing in the mountains need 12-14 pounds of total digestible nutrients per day. This can be supplied by 24-28 pounds of good quality hay or dry grass. Horses would need to graze about 12 hours to obtain this much grass. The hay or grass intake can be reduced to as little as 12 pounds per day if a concentrate such as oats is used. For example, if a horse is fed five pounds of oats, it would need to eat 20 pounds of grass or hay. Ten pounds of oats and 12 pounds of grass or hay would be a satisfactory ration. If less than 12 pounds of roughage is fed, the horse may feel hungry and dissatisfied because of lack of bulk.

To avoid introducing weeds into the mountains, all horse feed used at trail heads and in the mountains should be free of weeds. Only carefully selected hays which are certified as completely free of weeds should be used.

CONCLUSION

When riding into the mountains, think about how it all must have looked before any man or horse had been there. When you ride out, leave it the way it must have been—clean, unsoiled, undisturbed, unspoiled, beautiful and natural.■

The Catchall

Helena Civic Bodies Support Elkhorn Wilderness

In two controversial resolutions, the Helena Chamber of Commerce and the Helena City Commission have called for wilderness designation for the Elkhorn Mountains. Both civic bodies indicated that protected status for the Elkhorns was the most favorable use of this area from the standpoint of both the economy and quality of life.

In a July 1977 news release, the Helena chamber stated, "It was found that the public would receive far more for [its] money by protecting the area in question...." In the same release, the chamber acknowledged the growing demand for more such areas in the Helena National Forest, stating "...wilderness recreation is the fastest growing use on the national forests today."

The chamber's position in support of Alternative B (which calls for 79,790 acres in the Elkhorns to be designated as wilderness) was further emphasized in a letter from its former president, O.F. "Ty" Ingram, to former Helena National Forest Supervisor James Jordan. "We would like to recommend," Ingram wrote, "that the slopes of Elkhorn Peak, and Elkhorn Peak Proper, be included in the wilderness area.

"We feel that the most important part of the Elkhorn area is the Tizer Basin, and this should be preserved for recreational use, wildlife habitat and watershed protection. The Helena area is in need of an excellent area such as this," Ingram wrote, "to help provide recreation for our residents, and to help the outdoor recreation industry of the area."

Ingram emphasized the chamber's support of Alternative B was strengthened by the knowledge that "...from the standpoint of economics, the demand for recreational areas and the quality of life in the Helena area, this alternative is the best possible one for adoption."

The Helena City Commission observed in its resolution that "an Elkhorn Wilderness in proximity to Montana's capital city will provide important long-term social and economic benefits to the residents of Helena."

The commission cited the overwhelming public support for wild designation of the Elkhorns by Helenans, but noted in its resolution that "...the Forest Service is leaning against any wilderness designation in the Elkhorns in direct contrast to the expressed desires of Helenans for an Elkhorn Wilderness."

The commission's resolution stated as a criteria for its decision on the Elkhorns that "...there has been substantial support expressed from the Helena area for wilderness designation—of the 152 Helenans responding to the Forest Service 'alternatives packet,' only three favored the 'no wilderness' alternative. Of the total public input, 76% favored some wilderness for the Elkhorns, with 68% of the total favoring the maximum wilderness option of Alternatives A or B."—*Steve Byers*

Tizer Basin in the Elkhorns, with Crow (left) and Elkhorn peaks on the horizon. F&G photo: Bill Schneider

Billings Wildlife Manager Dies

On Oct. 16, 1977, H.O. "Buck" Compton, Region 5 (Billings) wildlife manager for the Dept. of Fish and Game, died in St. Mary's Hospital in Rochester, Minn.

Buck was truly a professional in the wildlife field, but he also had a personal interest in the communities in which he lived and worked. In his early years, he was active in 4-H. While working for the department in Miles City, he was a member of Jaycees and the Yellowstone Council of the Boy Scouts of America. In the latter organization, he was a councilman,

recycled paper

merit badge counselor and the adult leader of the department-sponsored Explorer Post. In Billings, he served as vice president of the Bronc Booster Club of Senior High, was past president of the Billings Heights Kiwanis Club and worked extensively in the Billings Heights Little League Baseball Assn., serving as president in 1975. He was also president of the Bench School PTA.

Buck's intense interest and dedication to his family were extended to the youth of the several communities in which he resided. His community affiliations were an integral part of his life, as evidenced by his willingness to serve and to do the things that needed to be done.

Buck gave a full measure to the job and profession of wildlife management. His interest was not confined

H.O. "Buck" Compton

solely to the duties at hand, but also to the professional societies affiliated with the wildlife management business. He was a member of The Wildlife Society, its Northwest Section and Montana Chapter. The success of the 1972 Antelope States Workshop, conducted in Billings in June of that year, was due to Buck's efforts as workshop chairman.

Buck was a dedicated and professional wildlife biologist. He approached the myriad complexities and problems associated with wildlife management in a very straightforward manner. To many, Buck may have appeared somewhat abrupt; to those of us who knew and worked with him, he was simply "calling a spade a spade." The people who worked under Buck's leadership regarded him highly as a boss. He shared a friendship and working relationship with them which few are lucky enough to ever attain. Buck was our friend and colleague. He was a person with whom we laughed, argued and felt proud.—*Wynn G. Freeman, administrator, Wildlife Division, Dept. of Fish and Game*

The Little Things Count Up

More than 50% of the energy we use in our homes goes into heating and cooling; 15% goes to heat water.

* * * * *

Replacing every third bulb with a burned-out one (for conservation and safety) saves about 4% of the electricity used in a family home. If everybody did this, it would conserve enough electricity to light about 16 million homes.

* * * * *

Dirt in light fixtures absorbs light, so clean them regularly.

* * * * *

"Instant-on" televisions use electricity even when they're turned off.

* * * * *

Lowering the thermostat from 68°F (20°C) to 60°F (15.6°C) on winter nights saves about 15% on energy. If everybody did this, it would save enough to heat 9 million homes during winter.

* * * * *

A lush, green lawn requires about 1½ inches (38.1 mm) of water per week, but experts estimate that most lawns can survive on ¾ inch (19.1 mm).

* * * * *

Avoid watering on windy days or during the heat of the day.

* * * * *

Sprinklers throwing large drops of water in a flat pattern are more efficient than fine, high sprays.

* * * * *

Turn the electric hot water heater off at the main panel when leaving home for five or more days.

* * * * *

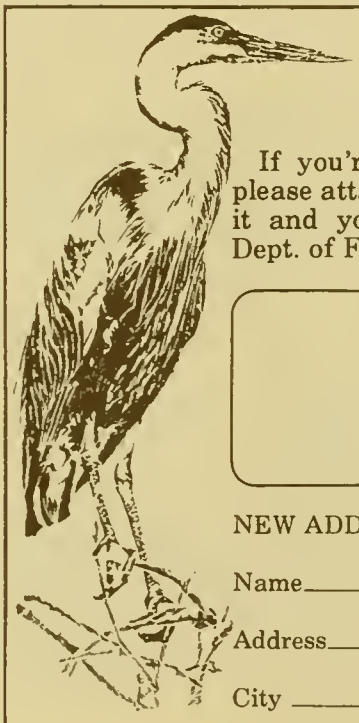
Keep the refrigerator operating temperature at 37°-40°F (2.8°-4.4°C).

* * * * *

If every dishwasher user cut down one load per week, it could save enough electricity to heat 140,000 homes during winter.

* * * * *

If everybody washed clothes in warm or cold—instead of hot—water, it would save enough energy to heat



Moving?

If you're planning to move in the near future, please attach the label from your last issue and send it and your new address to *Montana Outdoors*, Dept. of Fish and Game; Helena, MT 59601.

NEW ADDRESS:

Name_____

Address_____

City _____ State_____ Zip_____

Tom McBride photographing bighorn sheep for "Window on Wilderness."

"Window on Wilderness"

Of the many current efforts to inform the public on the wilderness situation, few are as effective as Tom McBride's multimedia program, "Window on Wilderness."

The first of a planned three-part series, "Window on Wilderness" is a production combining thousands of transparencies, many projectors and dissolve units keyed to words and music—all designed to blend into a continuous tapestry of images and moods. McBride's live voice-over-narration augments, with information and query, the effect of the visual experience. Throughout, his theme does not crescendo, but quietly emerges and permeates the audience with a sense of the beauty and preciousness of wild country and the basic human need for it—if only to know it is there.

The program begins with high, wild places and images fading and dissolving into each other, and gently eases into more intimate shapes: of time-sculptured wood, wildflowers and butterflies and continues through the food chain from insects to man. It analyzes the phases of a day from sunrise to dark and then sequentially melds the seasons, spring to spring.

McBride has been a university instructor and has lectured widely on wilderness and photography. He has been featured in such publications as *New Age Journal* and Kodak's *Studio Light* and was voted Montana's "Photographer of the Year" in 1973. In creating "Window on Wilderness," he traveled over 100,000 miles and spent five years in the field with his camera—including one in which he lived among a band of bighorn sheep.

McBride has said he seeks more in his subsequent two segments of "Window on Wilderness" than establishing an awareness of wild land values. "I want to convey the relationship of humankind to wilderness, which lies at the source of progress to now, and from now, as people grapple with complex survival multiples and the necessity to define themselves," he said.

"Window on Wilderness" is available for wildlife conferences, wilderness symposiums, photography classes, sociological forums and other groups. For more information, contact: Tom McBride, 2051 Colorado Gulch; Helena, MT 59601.—*Steve Byers*

1.6 million homes in winter.

* * * * *

Installing a flow restriction device in the shower can cut water usage by 50%.—*courtesy the Montana Energy Advisory Council*

House Hearing Conducted on Nongame Act

A hearing on one of the most popular pieces of wildlife legislation to hit Congress in many years was conducted in early October 1977, according to the Wildlife Management Institute. The House Subcommittee on Fisheries, Wildlife Conservation and the Environment heard administration and public testimony on HR 8606, the "Nongame Fish and Wildlife Conservation Act of 1978."

A full slate of witnesses attended the full-day hearing and offered overwhelming support for the nongame proposal. Administration witnesses, which included the U.S. Fish and Wildlife Service (FWS) and the Council on Environmental Quality, were the only ones hedging a bit. They obviously were in favor of doing something to improve nongame management programs, but stopped short of supporting HR 8606. Instead, they recommended that the subcommittee postpone action on the matter until the administration develops its own proposal some time next year.

HR 8606 would establish a nongame fish and wildlife conservation program similar to the Federal Aid in Fish and Wildlife Restoration programs that have been successful in restoring and maintaining game populations. The bill would authorize annual appropriations which the FWS would apportion to state fish and wildlife agencies on a 25% state—75% federal matching basis, solely for nongame management. It also provides for 90% federal grants to states for initial program planning.

The major difference between current federal aid programs and the nongame proposal is source of money. Current programs are financed via manufacturers' excise taxes on certain hunting and fishing equipment. Under HR 8606, the nongame program would depend on annual appropriations.

Giving strong endorsement to a national nongame program, members of the National Audubon Society told the subcommittee, "It is well documented that the major threats to all wildlife are habitat loss and environmental degradation. These threats are not partial to game

or nongame species. They impact both with equal force. Therefore, the National Audubon Society urges Congress to pass enabling legislation for a program specifically for nongame fish and wildlife similar to that existing for game species via the Federal Aid in Fish and Wildlife Restoration programs."

Referring to program financing, Audubon spokesmen said, "Much of the success of the current programs can be attributed to the continuity and dependability of their funding source, i.e., an excise tax on hunting and fishing equipment. This stable base, coupled with the standards prescribed in those acts, provides for very workable, successful programs for our nation's 'game' fish and wildlife.

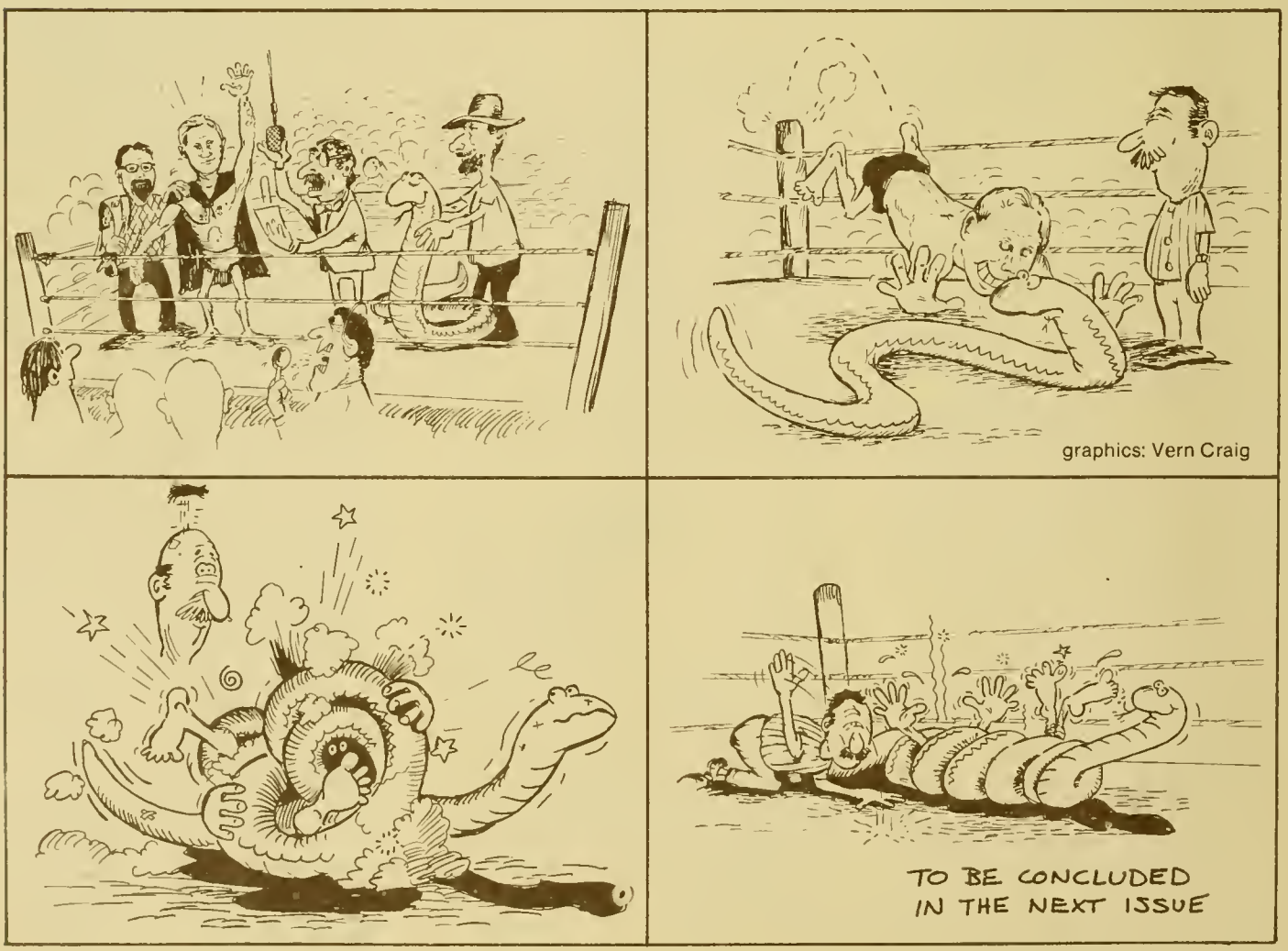
"On the other hand," the Audubon testimony continued, "the Endangered Species Act and the Marine Mammals Protection Act, which rely on appropriated monies, do not share the same success. It is from this historical perspective that the National Audubon Society encourages this subcommittee to consider the adoption of an excise tax on certain recreational equipment and wild bird foods as a vehicle for establishing the federal grant-in-aid funding requested in this act....

"In justifying this proposal, we point out that the nonconsumptive, recreational use of existing wildlife management areas exceeds the consumptive use by several fold. We feel that these recreationists, which include both consumptive and nonconsumptive users, would be willing to pay their share...."

Similar testimony supporting the excise tax approach to funding the nongame proposal was voiced by members of the national conservation organizations present. Rep. Edwin B. Forsythe (R-N.J.), author of HR 8606, said he would be more than happy to go for the excise tax approach, if the public asks for it.—*Wildlife Management Institute*

Montana's First Snake Pit—Part Two

In the Nov./Dec. 1977 issue, we ran an article and began a cartoon series on plans for the Snake Pit, a tourist development near Missoula. The environmental review is still incomplete, so the situation hasn't changed since November. Thus, we aren't having an update article in this issue. In the next issue, we will conclude the cartoon series and run another article updating this subject.—*Ed.*



F&G photo: Dale Graff

On The Road To Paradise

by Steve Byers

A FRIEND AND I were sitting in an Ennis, Mont. saloon, otherwise empty of customers except for an old man hunkered in the corner with his eyes closed and a prohibition grip on his drink. My friend, a book editor from New York and a fly fisherman of the rabid cut, had pilgrimaged to the Madison Valley to pursue monster trout.

The editor's usual good temper had melted away with the passage of 20 boats—or so he claimed—by his fishing vantage point near McAtee Bridge on the Madison River, and he'd gone fishless. He lamented, "I mean 20 boats in what looked like a convoy, each with two guys flailing water in front, beside and behind me."

"Oh," I said, "it can't have been that bad. Guides here are known to give every courtesy to other fishermen. You probably saw three or four boats and felt betrayed by the guide books."

"No," he said, "15 boats at least. I've had enough. I think I'll try the Big Hole River."

He railed on for some minutes and suddenly the old man in the corner said, "You, sir, are a quack."

"What?" asked my friend.

"Quack, quack," said the old man.

"Well, which is it, quack as in phony or as in quacker of hollow utterances?" my friend asked, unamused.

"As you like," said the old boy, who then drained his glass and raised it to the bartender who smiled. "Are you guys in for it," the bartender confided.

Ignoring the old man, my friend resumed his lament. "For years, I've consumed volumes of trophy tales about this water. I schemed and planned and finally ducked out here against all odds. And for what? To be fishless and trampled to death on my first glory day on the Madison. I really expected . . . well, more of a backcountry atmosphere."

Then, booming from the corner, we heard, "As no

man is born an artist, so no man is born with apprehension of the wild."

"Hey," my editor friend exploded, "that's Izaak Walton's 'The Compleat Angler' you've misquoted. It goes, 'As no man is born an artist, so no man is born an angler.' Are you implying I lack credentials to appraise backcountry, or is that a sneaky way of saying I'm not yet a *bona fide* fisherman?"

"As you like," said the old man, draining his glass.

"Anyway, I'd like to find a trouty piece of water to stand in and not see a human all day," my friend said.

"Fish Temperance Lake," the old man trumpeted.

"Is there a road there?" my friend asked. "I've read a lot about fishing this country and I've never heard of Temperance Lake."

"Is there a road to paradise?" asked the old man, motioning with his glass to the barkeep. And then he said, "The swiftest traveler is he who travels roads of his own making."

My friend rose and approached the old man. Shaking his finger at him, he chided, "That's Thoreau you're misquoting now. It goes, 'The swiftest traveler is he that goes afoot.' Are you saying I'd learn faster if I walked through life or that I should think for myself?"

"Wait!" my friend said and raised his hand against the old man's "As you like" —which came anyhow.

"Look," said my friend, "I'm not really into crashing around the backcountry alone. I came here to take one big fish in a place where...."

" 'The breath of flowers is far sweeter in the air . . . than in the hands,' the old man interrupted. 'Therefore nothing is more fit for that delight than to know what be the flowers and plants that do best perfume the air.' "

"Okay, you've got me," my friend said, "although doubtless you've violated the quotation—who this time?"

The old man's eyes lit up and his thin, blue lips stretched over barren gums. "Either Francis Bacon or the Almighty. And you a scholar...tsk, tsk."

The bartender leaned close to my ear. "He comes out of the hills every year about now. Gets cabin fever holed up all winter in the mountains. He snowshoes around his trap lines all day and reads books all night. Says he never sleeps—says 'to be awake is to be alive.' He's old, gets confused, you know."

"Sounds like he does," I agreed.

The old man may or may not have been confused. But from that day on, my friend raced in full career toward every sort of backcountry activity—from wildlife photography to winter camping. He'd left with the old man that afternoon and it was somewhat later in the week I learned of the bizarre episode which transformed him from a single-interest sportsman into a backcountry enthusiast.

A sport shop owner of my acquaintance later ticked off a voluminous list of purchases made by "some editor guy from New York," who dutifully followed "old Rock House Johnson" around the store loading a backpack with everything the old man pointed to and muttering over and over, "Temperance Lake, is it?"

"He who has not walked alone and fished for trout on a wild river midst peaks beneath a sky adrift with clouds has not really had a look at his beginning or come to fully understand himself."

Every year I receive from my friend a terse pronouncement from some remote area of the globe, such as this last one: "Perception of beauty is requisite to mental health." Here, I believe, he's misquoted Thoreau. It goes: "The perception of beauty is a moral test."

Many persons seem unreceptive to the lure of backcountry or, like my friend, come late to realize its incredible recreational potential. They are ever after sorry they wasted so much time before coming to know it. Backcountry holds a fascination for almost anyone who gives it a chance. But many are uninformed or misinformed about backcountry activities, believing such pursuits require special skills difficult to master, or that backcountry is suited only to the daring young.

Many backcountry pursuits *do* require special knowledge and conditioning, but many more demand little else than enthusiasm and the ability to put one foot in front of the other. Even then, what's wrong with choosing a recreation that demands some physical conditioning? Most do.

More often, the first few excursions into backcountry, afoot or on horseback, are an opiate and make subsequent trips a compulsion. The varied richness of experience accommodates a wide range of interests, ages and abilities. It makes clear the elusive but genuine worth of backcountry. Undeniably, backcountry is a hard asset to take to the bank. But it offers solace and spiritual rejuvenation to rock climbers, campers, hunters, anglers, skiers, photographers, backpackers, rock hounds, mushroom hunters, naturalists, bird watchers, snowmobilers—and to anyone else to whom there's magic in all things wild.

An old, crippled rancher I know professed to care not a whit for backcountry, saying it served no useful purpose since age and infirmity precluded his use of it. Although limited and carefully controlled, several wild and scenic areas are traversed by roads and age need not deter enjoyment.

In Montana, backcountry is vast. The impact of rich experience in it is intensified by comparison with other places where the mountains are a facade, masking little depth.

The many magazines and books singing the praises of the backcountry experience have done much to increase public appreciation and concern for backcountry. But for the most part, the appreciation is vicarious—and there is no substitute for firsthand acquaintance.

Andy Russell scolds, in his book, "Trails of a Wilderness Wanderer": "He who has not walked alone and fished for trout on a wild river midst peaks beneath a sky adrift with clouds has not really had a look at his beginning or come to fully understand himself. For it is in such unscarred country beyond the marks of wheels that a man really finds himself—knowing the warm feeling in his soul that only fear is the enemy and that true values are not measured in bank accounts cached away in artificial edifices of stone, but in depths of serenity and peace found where air is clean and water flows cold and pure."■

Many backcountry pursuits do require special knowledge and conditioning, but many more demand little else than enthusiasm and the ability to put one foot in front of the other.

F&G photo: Bill Schneider

What Is Wilderness?

The first chapter of "Battle for the Wilderness," by Michael Frome, published by Praeger Publishers, Inc. Copyright 1974 by Michael Frome, reprinted with permission of the author. Copies available from The Wilderness Society, 1901 Pennsylvania Ave. NW; Washington, D.C. 20006. Cost $8.95 hardback, $2 paper, plus 50 cents handling for each.

Wilderness has been defined by law as a specific type of untrammeled place, "where man is a visitor who does not remain." It sounds simple on the face of it. The law, however, serves only as a starting point for determining—or discovering—what wilderness really is, what it does and whom it serves.

A football field is endowed with clearer dimensions. The playing portion is 100 yards long and 30 yards wide. The goal posts at both ends are precisely the same height and width. A basketball court also is fixed by prescribed measurements. It is rectangular, with identical raised baskets at

each end, and is always played with a round inflated ball approximately 30 inches in circumference. Golf courses vary in size and shape, but the goal is consistently demonstrable: to hit the small white ball into a succession of holes, usually nine or eighteen, in the lowest number of strokes.

Wilderness is controlled by no such rules or evident objectives. It is more than a place, but equally an idea, a principle, a state of mind, even a dream. While the state of wilderness exists in the mind, it does so only to the degree it exists somewhere on the ground. It becomes worthy of description as wilderness because of its character, not because of any particular purpose it serves. Once it retains that character, however, it serves many purposes.

The principles of wilderness are based on the completeness of all life, rather than on the dominion of man alone. The principles are not new or restricted to science but extend to the artistic, ethical, spiritual or religious, as well. They are predicated on the unified concept of land, community and universe and relate the experience of mankind to a universe that is alive and not dead. The man who believes in wilderness doesn't lose sight of concrete objects but sees them in the totality of the world, which is loved for its own sake.

Some think of wilderness as being essentially a large area, ranging from 5,000 acres upward to a million acres or more, where one can get away from all evidence of civilization for a few hours or, even better, for days or weeks, without crossing trails with another soul. The large areas are desirable, but wilderness embraces a sample of the primitive in any degree. It may be as small as one's backyard or a clump of wild plants and grass that provide a feel for the original

F&G photo: Bill Schneider

photo: Danny On

photo: George Wuerthner

landscape. Even the sight, sound, or smell of a miniwilderness furnishes a tranquilizing and enriching interval, a subconscious reminder of man's rootstocks in nature.

Others insist that wilderness must be restricted by standards of purity to utterly primeval lands looking exactly as they did before man evolved from the apes. In this age of fallout there are no places left on the earth free of human disturbance, not even at the polar icecaps, but this need not be the basic criterion. Wilderness is where man's sounds, chemicals and other by-products of civilized life are not dominant. It can be any area where nature prevails or might prevail given the passage of time. It can be any place, of any size, so long as active ecological succession, structural diversity and naturalness are permitted.

Wilderness is a part of man's civilization. It is a civilizing force. Wilderness gives America the quality of spaciousness, the touch of frontier and far horizons that are rooted in the national conscience. It provides new generations a link with the adventure and history of old generations, something firm to hold on to while plunging through the onrushing uncertainties of time. Wilderness preserves in living form the tableaus memorialized by artists and poets, so that just as their works are part of the cultural heritage, so the sources remain to serve new artists and poets.

Wilderness is the antidote to an overurbanized, supertechnological age. Man has proved himself resilient, capable of adapting to smoky skies, polluted streams, crowded and noisy cities, but his adaptive potential is not unlimited. Little wonder that we are filling hospitals, mental institutions, clinics, prisons and cemeteries with the fruit of terrible divorcement from a

photo Milton E. Stiles

native environment. Modern man, after all, retains inherent biological characteristics of his ancestors, just as the long-domesticated dog retains characteristics of his wild forebear, the wolf. The human foot hasn't changed much since the paths men trod were grassy slopes, woodland trails and spongy bog hummocks. The same set of genes governs emotional development, drives and needs as when he was a Paleolithic hunter or Neolithic farmer. Wilderness furnishes diversity and stimulating experiences of the natural world for society to draw upon now that the material world has been seriously depleted of its resources.

Wilderness is a recreational resource affording the enjoyment of hardy outdoor sports—canoeing, hiking, climbing, riding, hunting and fishing. It combines the thrills of jeopardy and beauty, an adventure into the physically unknown that has always constituted a major factor in the happiness of curious souls. The wilderness hunter, learning the habits of animals and meeting the prey on its own ground, appreciates the stillness, physical exercise, woodlore, the pride in roughing it, the kill that comes hard, rather than easy. The fisherman, rather than being concerned with the catch itself, focuses on the challenge; even when fish are few and scattered, he finds rewards in the setting and in his feeling of harmony with the flows of weather, wind and water.

Wilderness is the chorus of thrushes, the thunder of waterfalls, the mist rising from a mountain meadow at twilight, the ancient voices riding the breezes of night enveloping the dark air. It is the chance to wade in marshes where, as Thoreau wrote, the bittern and meadow hen lurk, to hear the whistling of the snipe, to smell the whispering sedge where only some wilder and more solitary fowl builds her nest. It is the intimate contemplation of Darwin's tangled bank, heavily clothed with plants of many kinds, with birds singing in the bushes, with various insects flitting about, and with worms crawling through the damp earth and the reflection that these elaborately constructed forms, so different from each other and dependent upon each other in so complex a manner, have all been produced by natural laws acting around us.

Wilderness is an oak forest furnishing acorns, leaves, twigs, bark, flowers and buds to support bears, squirrels, white-footed mice, wood rats, wild turkeys, titmice, nuthatches, crows, doves and owls. It is a mosaic, in which the reality of death needs no apology, where natural death advances through history as the nourishing helpmate of birth and blossom. Within the mosaic the observer finds beauty in the fallen tree feeding organisms of decomposition, such as fungi, bacteria and myriad forms of animal life, and serving as the seedbed and nursery for new trees and flowering plants.

Wilderness is found in every type of terrain where a life community is found—forest, prairie, desert, tundra, rock and ice, marsh, in underground caverns, at the edge of the sea and beneath that watery surface—with each community demonstrating its distinctive lessons in adaptation and function.

Wilderness is wherever it may stimulate curiosity over the natural cycle, even in an undeveloped fragment of a great city where one may watch the grace of a fluttering butterfly, the red and black of a milkweed beetle or the shimmering back of a slow-moving slug.

Wilderness is an exercise in

photo: Jerry Manley

photo: Lance Schelvan

photo: Paul Miller

F&G photo: Bill Schneider

solitude, in which the individual achieves freedom from his own problems, but it also provides the opportunity for companionship with others, sharing joys and hardships, learning the meaning of comradeship, humility and open dialogue among men and women. It builds partnerships through revelations of common origin and common destiny.

Wilderness is a humanitarian resource, the basis of a more healthy social structure, a banner of hope to the ghetto dweller deprived of human dignity and boxed in by crowds, noise, litter and concrete. How can human life be valued highly in a society shaped by destruction, despoliation, degradation and exploitation of man by man? Wilderness is the alternative to waste and dissent that characterize modern society. It restores belief in the environment, each other and ourselves.

Wilderness is a spiritual sanctuary that opens to the seach for a moral world. Even today religious leaders of the American Indians spend weeks on a high mountain or in the woods in contemplation of wilderness mythology so their feet may walk in the tracks of the Mountain Spirit. Leaders in many religions have sought a similar sanctuary. On one occasion Jesus Christ spent 40 days in the wilderness, where He had been led by the Holy Spirit. On another, He and three disciples undertook to visit a high mountain, probably Mount Hermon, on the northern boundary of Palestine. It was a deliberately planned experience in the expectation of rising above hazards and finding unlimited good. They sought no short cuts and doubtless would have spurned any offer of one. They felt they had found their reward when Jesus was transfigured.

Wilderness is a place for men, but not for men alone. A river is accorded its right to exist

photo: Vince Claerhout

because it is a river, rather than for any utilitarian service. The American tradition has sought only the transformation of resources; wilderness recalls a fundamental and older tradition of relationship with resources themselves. This generation could clean up the Columbia River or the Hudson River. But without understanding the true role of the river, as a living symbol of all the life it sustains and nourishes, and our responsibility to it, we would merely be balancing the cost benefits of using the river one way against the cost benefits of using it another.

Wilderness is for the bald eagle, condor and ivory-billed woodpecker, for birds that nest in the tops of old trees or in the rotted holes in tree trunks and that need dead or dying logs to house the grubs and other insects they feed on. Wilderness is the sanctuary of grizzly bears, mountain lions, bighorn sheep, elk and wolves that need large areas set aside from civilization.

Wilderness is a learning laboratory, a classroom in biology, botany and natural wonders, with examples and lessons on the relationship of living things to their environment. It answers the needs of the sciences for undisturbed and recovering areas in which to conduct base line studies concerning human influences on the earth and to determine the best ways of managing resources.

Wilderness is one of the incomparable freedoms, like freedom from want, war and racial prejudice and the freedom to cultivate one's own thoughts in one's own way. Wilderness brings stability, a sense of permanence, to a shaky, unstable world. ■

Voice in the Wild

by Ken Walcheck

RIVULETS OF GLISTENING droplets course down the paddle as the backpacker's raft quietly glides through black, moonlit waters on a remote lake rimmed by spruce and tamarack in the Bob Marshall Wilderness. A warm June breeze carries fragmented odors of summer's fragrant mysteries and stirs patches of delicate ripples on the lake's mirror-like surface.

Suddenly, the fragile silence is interrupted by the eerie, haunting "who-who-who-WHO-o-o-o" of a common loon. Some have labeled the loon's piercing wail "maniacal laughter," but those who know the wild lake country recognize the far-reaching liquid tremolo as an integral component of northern wilderness. Of all wild creatures that persist in such lands, the loon seems best to typify the stark wildness of primeval nature.

In categories of appearance and design, the common loon, *Gavia immer,* takes a back seat to none of the 650 bird species found in North America. Indeed, its specifications make it a vivid symbol of pristine wilderness: A stubby, tapered tail at one end and a three-inch black stiletto at the other. In between, smooth and compact with a sleek, glossy black head and a tapered "necklace" of zebra stripes; back and wings checkered with intricate black and white markings. About the size of a small goose; wing span to three feet. In flight, perfection of design with dagger-like bill outstretched to pierce the air like an arching javelin; capable of spanning great gulfs of northern sky. Eagle-eyed vision with bright, red computerized eyes. Appetite constant and considerable with a main diet of fish, mixed with samplings of crustaceans, insects and vegetation. Vocalizations rich; on breeding grounds, a long, mournful, drawn-out yodeling and loud resonant calls like crazy laughter. Fiercely territorial. Small lakes never hold more than one pair of breeding birds. Nest: a mass of debris on a small island, in a muskrat house or on the grassy edge of a fresh-water

lake or pond. Eggs: two, dark brown, spotted with black markings. Range: at home among the picturesque lakes of the wilder wooded portions of North America, from northwestern Alaska to Iceland, south to northeastern California, northwestern Montana, Northern Great Lakes states and Newfoundland. In the west, winters along the West Coast, from the eastern Aleutian Islands to Sonora, Mexico.

In the broad sweep of time between the present and that earlier era 130 million years ago in which birds evolved, nature, through her subtle mutations, turned the loon into one of the most graceful and efficient diving birds in the world. Its plunge beneath the surface, executed in jackknife fashion, is swift and precise. With wings closely folded, it propels itself by webbed feet and flattened ankles which usually work alternately, speedily driving the loon through the resisting water.

photo: Calvin Ryder

To lighten their airships, most birds, through evolutionary design, have discarded everything not concerned with flight. Loons, however, have relinquished the evolutionary gift of pneumatic (air-filled) bones present in other species that fly. Their bones are nearly solid, with a specific gravity close to that of water. Other architectural alterations that enhance underwater swimming include a heavy, cylindrical, elongated body with the center of gravity moved forward; small, thin, muscular wings which improve diving efficiency; a large heart that slows after submerging; blood vessels capable of shunting oxygenated blood to vital organs, and a unique mechanism that can store extra oxygen for deep dives.

A strong, submarine diver, the loon can readily plunge to great depths—up to 182 feet (55 meters)—while pursuing its prey. Under natural conditions, loons seldom stay underwater more than a minute, but endurance dives can last as long as five minutes.

Although the loon excels as an underwater acrobat, its ability to become airborne presents some problems. With muscular legs placed far back on the body and an upper leg joint encased within the body, little freedom of movement is permitted, so flight from land is virtually impossible. To achieve flight, the agile diver requires a long, splashing run across the water's surface. Once airborne, the heavy body, propelled by fast-beating wings, slices through the air with the least possible resistance and can engulf vast expanses of space between the thunder and the sun.

The fires of spring burn ardently in a pair of mated loons after they arrive at their breeding grounds. Courting behavior includes wild races across the water, plus noisy dives interrupted with rich vocalizations. Sometimes the pair will swim slowly toward each other until their bodies touch. Then both bills are pointed to the sky. It is deadpan comedy at its best—solemn and stately, and underlain with an odd, touching beauty.

* * * * *

A closing note on loons and wilderness. Some well-known outdoor paintings, such as Charlie Russell's classics, continue to grow in stature with each passing year, as appreciative eyes view diverse landscapes in wild settings. Many wild areas which Russell and other artists captured on canvas are now gone, or only remnants remain.

Despite shrinking wilderness areas, a few have heard of a master artist who has painted wilderness scenes for eons in the northern wild lake country. Only a few have viewed her evanescent masterpieces. The artist in this pristine setting is a deep and sparkling lake that wields a flawless brush. Like many artists, the lake has changing temperaments and no one can predict her moods and the precise scene she will paint.

The best time to view her work is during late spring, after the loon has arrived back from its coastal wintering. The work begins with a bold dash of boulders, brushed on a gravelly shore rimmed by towering spruce. As this scene dries in the sun, a gentle, westerly wind pushes fluttering ribbons of scattered clouds across an early morning sky touched with a blush of pink. At this stage, a pair of loons becomes part of the scene and the painting looks complete.

Such a work of art can only be hung in the mind—and then only temporarily. As years pass, details depicting the scene fade into barely memorable obscure shadows. Only the wailing call of the loon can unlock what was once perceived by the eye and captured in the mind. Those who hear it will feel a longing for wilderness that is hard to dispel.■

Got The After-Christmas Blues?

Cheer yourself up with a delightful Montana wildlife calendar. It's big, bold and colorful—12 ready-to-frame wildlife photos—and it will help you keep track of the new year in grand style.

And it's *free*, when you order or renew a three-year subscription to *Montana Outdoors* for yourself or for a friend. (With gift subscriptions, only the donor receives the calendar.)

The calendar may be purchased separately for $2. Please use the handy order card bound inside this magazine.

Dear F&G

Unnecessary Weed Control

We enjoy living in Ronan. But two things in particular bother us—aerial crop dusting and the weed control program. Over by the Ronan public schools, we watched our first such spraying of deadly chemicals. We had heard many stories of poisons being dropped on innocent, unappreciative people here, even of a children's picnic ruined because of these aerial dive bombers.

We moved to Ronan for fresh air and clean water after the deadly PBB poisoning in Michigan. Everyone there—each animal, each person—had PBB in his blood. It kills by the inch, from arthritic-like pains to cancer. The chemicals being sprayed over Ronan are probably just as deadly. Everyone is included. The air is poisoned and so are the streams, the water we drink, the cow's milk, the beef, the fish, on down to mothers' breast milk. Once the poisons enter the food chain, they cannot be eradicated. Once they enter our bodies, they never totally leave.

We can do nothing about our drinking water. Farmers are going to use such poisons in order to keep feeding America. But can't we keep them from bombing *us* with their airplanes, when more conventional means of spraying with better poison control are available? Can't we stop unnecessary weed control on our roads?

Let's make farmers responsible for the chemicals they put on our children and our property. And let's vote on the spraying of our county roads.—*Dr. and Mrs. Mike Moredock; Ronan, Mont.*

* * * * *

Dear Dr. and Mrs. Moredock:

I was interested in your recent letter.

Our Lake County Health Dept. staff, including the sanitarians, is very interested in the problem you describe and many other ramifications of it. After five years, I am just beginning to get the picture as to why such evils exist. I had to go broke with a natural fertilizer company to gain *some* understanding.

Don't blame your farmer/neighbor for anything other than a lack of discernment. He has been brainwashed by his friendly county extension agent who, in turn, has had his head filled with all sorts of lies from his state agriculture department and state agricultural school. These schools are practically subsidized by the chemical and oil companies (which make our fertilizers which create unhealthy plants which require pesticides *they* produce).

The agro-chemical industry is now to the point of sophistication, where it is convincing potato farmers to no longer wait for frost to cause dieback of the vines but to bomb them with herbicides, preferably via the aerial route. A by-product of herbicides, especially when these chemicals are subjected to heat, is one of the most mutagenic chemicals known to man. Soon we will have funny looking seed potatoes which will beget funny looking eating potatoes; then we will have funny looking kids whose parents ate the funny looking potatoes. Won't we ever learn? All these activities are aided and abetted by an agriculture department that is supposedly working for the people.

Suits have been leveled successfully against farmers, applicators and manufacturers involved with applying toxic substances inadvertently to the wrong target area or where drift has been a problem. I imagine most of the farmer offenders are innocent (or ignorant), but the "pushers" ought to be racked.

Please continue to make your views known and see if we can help you.—*Ralph K. Campbell, M.D., Lake County health officer; Polson, Mont.*

P.S. This letter was originally written as a personal letter to Dr. and Mrs. Moredock. Lest some think I am attacking *individuals* in the agriculture system, this is not so. There are many persons employed by the agriculture department who display a professional excellence and who have the integrity to look for better ways to farm. There are others who merely do a "good" job and recommend "acceptable" practices without worrying about the consequences, other than the economic consequences.—*Ralph K. Campbell*

Aluminum Snowstorm

Since I am a native of Montana, I always spend my three weeks annual vacation camping and fishing in my home state. The camping and outdoor recreation facilities are some of the best I've ever visited. But if something isn't done soon to control the litter of pull tabs from beer and soft drink cans that I see along roads, streams and campsites, then western Montana is going to look like an aluminum snowstorm had struck it.

Every place I've parked my trailer, I've picked up tabs by the dozens and put them in the refuse can. I hope your other readers share my opinion.—*Glenn S. Thompson; Edmonton, Alberta*

A Public Experiment

Before I begin flying the flags of discontent, I would like to applaud your magazine. The photos and articles are the most beautiful and interesting of any outdoor magazine around. *Montana Outdoors* is like a cool breeze dancing through the forest on a hot day.

As the 1977 hunting season arrives, the age-old feud between the hunter and the nonhunter is again thrust upon us. The same reasons for and against hunting are used time after time and, as usual, nothing is accomplished. I'd like to enter a suggestion.

Why not, as a public experiment, set aside a piece of forest land, stock it with enough deer and other wildlife so that the land will be able to nourish them comfortably and restrict it from hunting for a period of three or four years? Have it checked every six months. Then at the end of this time we'll see whose argument is right—the hunters (hunting helps regulate

recycled paper

wildlife populations) or the non-hunters (wildlife can get along beautifully without hunting).

I'll be waiting for responses in this magazine from either side.—*Joe Williams; Butte, Mont.*

Management Change Needed

In a past issue of *Montana Outdoors,* you stated that you do not categorically recommend wilderness classification of unroaded backcountry. If this is true, why is it that whenever the Forest Service makes plans to lumber an area, the Dept. of Fish and Game recommends wilderness classification as the sole solution to the problems of lumbering? I have yet to read where the Dept. of Fish and Game recommended alternate ways to lumber unroaded backcountry.

If the department were to supervise lumbering operations in these areas for the betterment of deer and elk habitat, what would result is an unroaded, logged and unlogged area in a checkerboard fashion for ultimate habitat of cover and feed.

After all, 100,000 acres of overmature forest offers deer and elk only cover and no feed.

The Dept. of Fish and Game is always talking about deteriorating habitat and I think it is time for the department to start getting involved in alternate forms of land management instead of categorically recommending that everything be turned into wilderness.

Please don't take me wrong. I do not recommend that the unroaded backcountry become a maze of lumber roads and summer homes. I'm dead set against this happening.

I want to thank you for doing what you have to do to stop this from happening, but let's hear the fish and game coming through with something more compatible for animal habitat than wilderness. Let's face it, the West has enough wilderness. What we need now is a change in management.—*Ray Mellinger; Boise, Idaho*

• *Please refer to the article, "Wilderness and Wildlife," elsewhere in this issue.*—Ed.

License Structure Displeases Reader

If there is a drastic drop in your subscriptions, it is not due to a bad magazine by any means. Of all the magazines I subscribe to, I enjoy this one most of all.

Every year I came to Montana to hunt deer and could not wait for the season to come. The last couple of years, your Dept. of Fish and Game has chosen to rip off the out-of-state hunter with the $50 prerequisite license. In short, we are being charged $50 to apply for a license whether we get one or not. How dumb do you think we are?

I have lost my interest in your state. So if I was not going to come there any more, I decided I didn't need a magazine to tell me about it. I guess it was my way of telling the fish and game where it could go. I should not make your magazine suffer for the money-grubbing stupidity of others. I don't think I am alone in my feelings.

Maybe I will renew my subscription after all. If you keep up the good work on the magazine and others in the department follow, maybe I will once again be able to hunt in and enjoy your state.—*Donald R. Smith; Wisconsin Rapids, Wis.*

Can't Afford $225

I've not lived in Montana for a number of years now, but I'm still a dyed-in-the wool Montanan, having come back to visit, hunt and fish year after year.

I realize that licenses had to increase in price as years go by, but why to $225 for the nonresident? It's the usual way of supposedly decreasing out-of-state hunters. However, all it does is eliminate those of modest means. Those with means can and do still enjoy Montana's big skies.

Why not consider the old-timers—the retired folks whose income is limited? There are not that many of us over 65 who still love to hunt and fish in Montana. As it is now, I can't afford the $225.—*F.H. Nicolet; Castro Valley, Calif.*

Questions With No Answers

You might wonder why I am writing you and why I subscribe to your *Montana Outdoors,* since I am an old-timer in Colorado. An issue several years ago on grizzly bears interested me so much I took out a subscription and I have continued it. I am active in my business, although I am 77 years old and was raised in Colorado on the western slope.

In the Sept./Oct. 1977 issue, the article on land acquisition by Harley Yeager was especially interesting to me. In my boyhood, the homesteaders came into western Colorado thinking

Next Time

Watch for these features in the March/April 1978 issue of *Montana Outdoors:*

Radio Telemetry. How modern technology has, for once, benefited wildlife by allowing biologists to more thoroughly study animal populations. by Ken Walcheck

Is There a Bigfoot? Every year, Bigfoot sightings make big headlines. Now, *Montana Outdoors* examines both sides of the question. by Vern Craig and other authors

Prairie Dog. This little rodent, a key factor in several ecological relationships, can be controversial. In addition to a long feature on the ecology of the prairie dog by Dennis Flath, two authors—Henry Nesbit and Hank Fischer—will take opposing positions on prairie dog control.

Winter Scenes. A series of color photographs of a Montana winter.

Weed Control. Another look into the questionable policy of controlling weeds (by John Weigand) and a close examination of biological weed control (by Jim Story).

Coyote/Deer Research. An update on the department's extensive research effort into the complexities of this predator/prey relationship. by Phil Schladweiler

they could make a living on the 160 acres the government was going to give them. Soon, they found out they couldn't. In the meantime, they killed a lot of our wildlife such as elk, deer and grouse. You can't blame them. They had to have something to live on. Around 1914, there was practically no game left in Colorado. World War I came and they all pulled out and the homesteads went back to the government. The Forest Service picked up a lot of the land. They tore down the cabins, barns and corrals. Today, you can hardly find the foundations of these homesteaders' cabins that were up every gulch.

Since then, deer and elk populations have certainly come back. There were areas in Colorado with so many deer that they starved to death by the thousands. It was terrible. I think the game department is trying to control things better now.

My father lost his high altitude ranches and others had it happen, as well as having their ranches torn down by the Forest Service. We never made a dime from these ranches, as far as I know. Now, Colorado is going into another expansion of land. In the last few years, tens of thousands of persons have moved into Colorado. You don't find a farmhouse or a log cabin, but a nice cottage built by someone. You can't imagine how many persons are coming into Colorado, especially eastern Colorado and Denver. Every weekend, thousands of campers and cars with trailers pull out of Denver. You will find them up every gulch. Again, you wonder how the wild game is going to exist.

Although I am an engineer, I am very interested in the development of the oil shale on the western slope and also coal development, which are supposed to take care of our energy problems. But I still worry how such development is going to affect the wild game over near White River, Yampa River and the valley areas the game has inhabited for thousands of years. Now, the white man is going to break up trails that go from summer range to winter range, trails the animals have used for hundreds of years.

In our case, though, the U.S. government owns practically all of this land, 40% of Colorado. The oil and coal companies have to get leases from the U.S. Dept. of the Interior. It is practically impossible, as some say, under the restriction of the environmentalists. Millions of barrels of oil and millions of tons of coal are held up while the people in Washington argue over questions which, even to an engineer, seem unsolvable.

Anyway, I have enjoyed your magazine for these many years and the many colorful pictures of wildlife and the high mountains of Montana which are like those we have in Colorado.—*Marcellus S. Merrill; Englewood, Colo.*

Contributors

Today, the fate of this country's last wild and undeveloped fragments of land is being debated. And wildlife is selected as beneficiary by advocates on *both* sides of the wilderness issue. As **Tom Hay** and **Jim Posewitz** point out in their article, "Wilderness is an issue that splits organizations, dissolves friendships and demands complete compliance, be it pro or con. The middle ground is a battleground." It is also true that wild things and wild land are inseparable—diminish one and you diminish the other, either in quantity or quality. "Wilderness and Wildlife" takes a hard look at the problems inherent in such debates, beginning on page 2. Hay is the department's supervisor in the Kalispell region. Posewitz heads the department's Ecological Services Division.

What happens when a mountain man trades quotations with a bookish editor from the East? Throw in the fact that the editor has been skunked on the Madison River and the mountain man claims to have an answer to his dilemma. What unfolds is a dandy piece of fiction about the opening up of a wide range of backcountry experiences for the editor, under the old man's tutelage. As **Steve Byers** writes, "Backcountry holds a fascination for almost anyone who gives it a chance"—as the editor found out. Byers is currently a writer for the department. His free-lance pieces have appeared in *Esquire* and *Gentlemen's Quarterly* and he will publish a novel later in 1978. Turn to "On the Road to Paradise" on page 15.

Those who hear its call feel a longing for wild country that is hard to dispel. The call belongs to the common loon, a vivid symbol of the wild lake country of the north. As **Ken Walcheck** writes in "Voice in the Wild," "Of all wild creatures that persist in such lands, the loon seems best to typify the stark wildness of primeval nature." Turn to page 28 to learn more about this creature which is also one of the most graceful and efficient diving birds in the world. Walcheck, formerly an assistant professor of biology, is the department's information officer for the Miles City region.

The pen and ink illustration of two loons on the back cover was done by **Takehiro Taira**. Taira travels through the Northwest showing his work and operates the Leisure Art Studio in Kalispell, Mont. He has been in the United States for two years and has done sketching and cartoon work. *Montana Outdoors* is grateful for his contribution.

The outcome of the debate over wilderness will obviously affect the future of Montana's wild lands. Because of the multitude of proposals, it's impossible to address all of them. MO has attempted to cover nine of the most significant in "Current Wilderness Proposals," beginning on page 35. We are grateful to the following persons for their contributions to this section: **Mike Comola** ("Scotchman Peaks") is chairman of Northwest Citizens for Wilderness and president of the Montana Wilderness Assn. (MWA). **Rick Trembath** ("Great Bear") is a member of Citizens for the Great Bear. **Mike Aderhold** ("Charles M. Russell National Wildlife Range") is the department's information officer in Glasgow. **Frank Culver** ("Spanish Peaks") is an environmental planner with the Montana Dept. of Natural Resources and Conservation (DNRC). **Robin Tawney** ("Taylor-Hilgard") is a free-lance writer living in Helena. **Bob Anderson** ("Absaroka-Beartooth") is the administrator of the Energy Planning Division for the DNRC and former president of the MWA. **Roderick Barcklay** ("McGregor-Thompson") is a member of Friends of McGregor Lake. The other two articles ("Elkhorn," "Rocky Mountain Front") were written by MO's editor, **Bill Schneider.**

un-endangered species

The plight of endangered species has become a familiar story to many Americans. And while this awareness has helped to foster a greater concern for the welfare of wildlife, it has also caused many to believe that most all our wild animals face a bleak and uncertain future. Even though some natural land areas continue to be degraded, the news about wildlife is not all bad. Far from it.

Over the years, our state wildlife agencies have restored to healthy and abundant numbers many species that were thought to be on the brink of extinction only some 75 years ago.

The acquisition and restoration of millions of acres of natural habitat is one reason for this amazing comeback. Vigorous enforcement of protective laws for certain species is another reason.

Most all the money for these efforts comes from American hunters. Through the license fees and special taxes they pay, hunters have contributed over $3 billion in the past half century for wildlife restoration, providing secure habitat not just for a few game species but for the many species that are never hunted at all. The result is an abundance of wildlife for all Americans to enjoy, each in his own special way.

Pronghorn Antelope: *1925–* Estimated 13,000 to 26,000 in U.S.A. *Today:* Minimum population in all western states is 500,000.

Presented by the National Shooting Sports Foundation and approved by the International Association of Fish and Wildlife Agencies.

Current Wilderness Proposals

The future of roadless Montana will be sealed in the next few years.

CONGRESS PASSED the Wilderness Act of 1964 and set into motion a movement that is now, 14 years later, finally coming of age. Most of America's roadless land has been inventoried, and large tracts have been recommended for inclusion in the

National Wilderness Preservation System, created by the Wilderness Act.

During the next few years, Americans will decide how much of the nation's public land will be designated as wilderness and thus kept in its natural state. According to The Wilderness Society, only about 10% of Montana remains roadless. Much of this 10% has been recommended for wilderness or for special studies to determine if it qualifies for wilderness designation.

Since wilderness designation prohibits most commercial development, the movement to preserve the last roadless land has been—and will continue to be—enmeshed in controversy. Proponents argue that since 90% of Montana (98% of the continental United States) has already been developed, preserving these last remnants of the great American wilderness is highly appropriate. But opponents insist there's already enough wilderness and thus opt to keep the potential for development of wild lands.

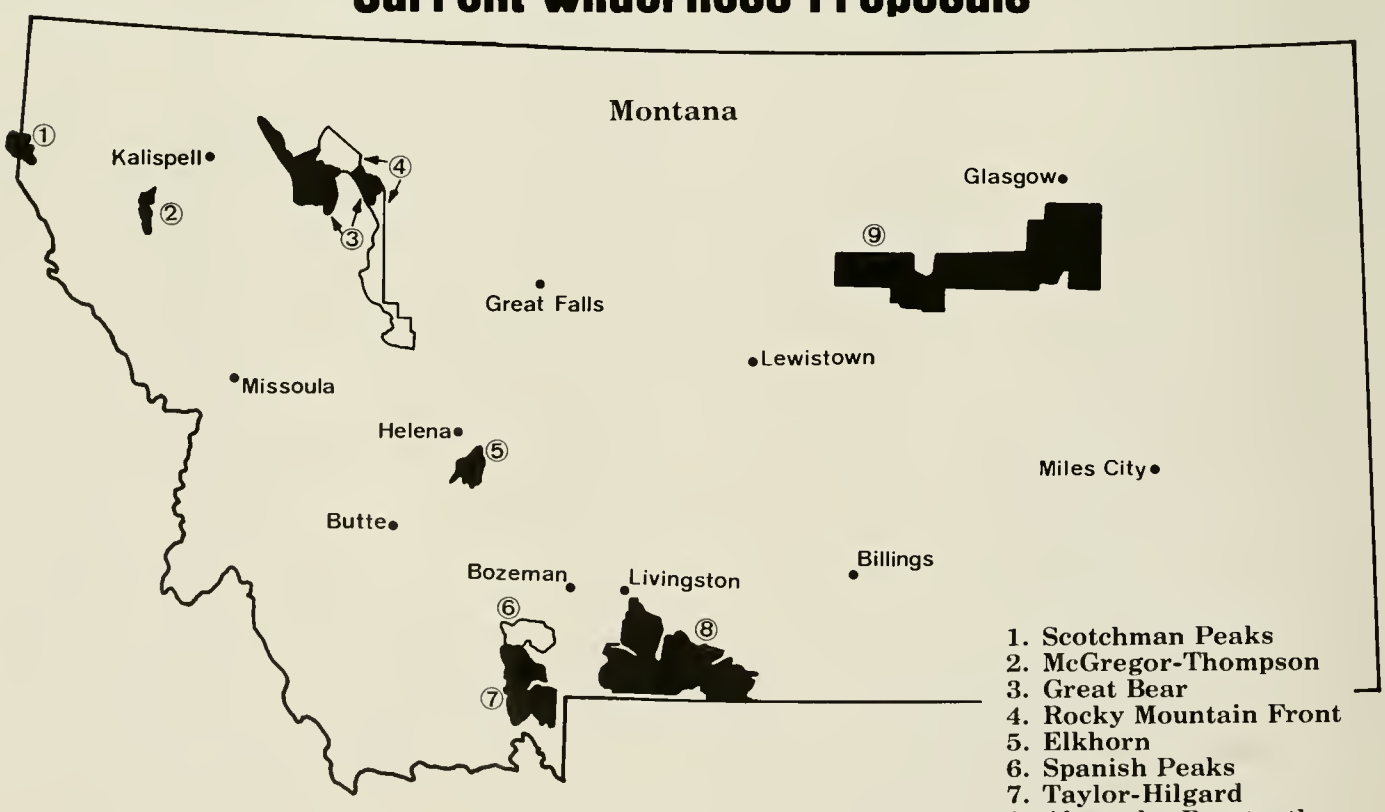
Obviously, the outcome of this debate will affect the future use of Montana's wild lands. Because of the numerous and varied proposals, it's nearly impossible to address all of them in one article—or for that matter, even in one magazine. But in an attempt to cover a few of the most significant or current wilderness issues, *Montana Outdoors* has included information on nine areas. By publishing this, the Dept. of Fish and Game isn't encouraging support or opposition to these wilderness proposals. Hopefully, however, readers will become actively involved in wilderness questions. Decisions affecting the future of Montana's wild country *will be made* in the next few years and active public participation will be necessary if the public interest is to be served.—*Ed.*

Scotchman Peaks

MENTION THE CABINET MOUNTAINS to most people who live in the northwestern corner of Montana, or have spent time there, and they'll tell you about the Cabinet Mountains Wilderness, a 95,000-acre area south of Libby. But the Cabinet Mountains Wilderness is only half of the roadless country in this section of northwestern Montana.

Straddling the Montana-Idaho border, the "other" Cabinet range begins at the Kootenai River near Bonners Ferry, Idaho, heads south to the Clark Fork Valley near Heron, Mont. and covers an area much larger than the established Cabinet Mountains Wilderness. Although roads and timber harvesting

Current Wilderness Proposals



Taylor-Hilgard (preceding page). F&G photo: Bill Schneider

have subdued many drainages, at least 140,000 acres remains roadless.

Further south, east of Pend Oreille Lake in Idaho and west of Bull Lake and the beautiful Bull River Valley in Montana, lies the stretch of rocky basins, waterfalls and deep timbered valleys that has come to be known as Scotchman Peaks. Here, the long state line ridge is dominated by peaks with names like Squaw, Billiard's Table, Sawtooth, Savage and Scotchman.

Relatively untouched by man, the Scotchman area remains a *de facto* wilderness, a touchstone with the past. A few visitors have seen grizzly bears, and sign of the big bears can be found scattered across avalanche chutes and grassy side hills of upper drainages. Long established bands of elk spend the summer in and around the timbered pockets. Along the lower stream bottoms and on the brushy hillsides above the Clark Fork River, these same elk winter. In spring, they are often seen in the Bull River Valley. As long as anyone can remember, mountain goats have lived undisturbed on these almost inaccessible mountains. In addition, white-tailed and mule deer and a large variety of predators, furbearers and songbirds frequent the Scotchman Peaks area.

In recent years, bighorn sheep have drifted into the rocky parts of the Scotchman, from a group transplanted to Berray Mountain across the Bull River. Add to this array of wildlife the many black bears, raptors and occasional moose, and the Scotchman Peaks area becomes a summary of wildlife in northwestern Montana.

Reminders of Montana's timbered past are found in the western Cabinets as well. Many ancient western redcedars in the Ross Creek area are now part of the Ross Creek Scenic Cedar Grove which is served by an access road and trail for easy viewing. The cedar grove affords an access point for the few people venturing beyond into the heart of the magnificent Scotchman country. Further up this drainage and in other valleys, such as Spar Creek, some of Montana's largest mountain hemlock, western larch, white pine and western redcedar grow.

In the higher, wet meadows, wildflowers abound, often accompanied by waterfalls, which exist partly because of exposed bedrock. In exploring rock formations, man has discovered another asset of the Scotchman country—*minerals.*

If Montana's Dept. of State lands grants an operating permit to American Smelting & Refining Co. (ASARCO), the first of possibly many large-scale mining developments will be under way under the name of the "Troy Project." The proposed ASARCO project is situated on the northern flank of Mount Vernon, adjacent to the Scotchman Peaks roadless boundary. Although the company may be sincere in its efforts to address environmental impacts, difficulties such as leaching from 400 acres of tailings ponds and many people moving into this primitive setting represent potentially serious impacts for both the Scotchman Peaks area and the adjacent Bull River and Lake Creek valleys.

The U.S. Geological Survey has identified similar mineral deposits near and within the Scotchman Peaks Wilderness Study Area.

Long a forgotten piece of backcountry, too steep and harsh to log, lacking fishing holes and rugged to hunt, the Scotchman area's wilderness potential was first recognized in 1971 during the Forest Service's (FS) Roadless Area Review and Evaluation (RARE). At that time, local residents and the mining industry did not support wilderness designation. However, the FS recommended a high, rock-bound core of 37,020 acres for wilderness study. This core, situated in Idaho and Montana and managed by the Kootenai and Panhandle National forests, was subsequently accepted by the chief of the FS as a new wilderness study area. (For administrative purposes, the FS manages the Coeur d'Alene, Kaniksu and St. Joe National forests as the Panhandle National forests.)

In coming months, officials of these two national forests will determine the future of Scotchman Peaks wild country, its solitude, rugged freedom and mineral wealth. A crucial key to this determination will be the public's participation. For more information, write Floyd Marita, supervisor, Kootenai National Forest, Box AS; Libby, MT 59923 and Ralph Kizer, supervisor, Panhandle National Forests, Box 310; Coeur d'Alene, ID 83814. For additional information, contact a local wilderness advocacy group working for the Scotchman's future: Northwest Citizens for Wilderness, Star Route; Noxon, MT 59853.—*Mike Comola*

Great Bear

LYING BETWEEN Glacier National Park and the Bob Marshall Wilderness is a spectacular piece of wild country known as the Great Bear. Not surprisingly, it possesses much the same scenic grandeur, character, resources, flora and fauna as these two well-known neighboring areas. From the glacier on Great Northern Mountain to the thick lodgepole flats of Schafer Meadows to the open, windswept ridges along Birch Creek, this is a diverse, beautiful land.

Like the main artery of a living land, the upper Middle Fork of the Flathead River flows through the Great Bear. At times, it seems to stop in mirror-like pools. Then, with little notice, it races into a series of white water rapids. But for its entire journey, the river runs clear and clean—pure enough to sustain good populations of westslope cutthroat and Dolly Varden trout. And it is wild enough to have recently been protected under the Wild and Scenic Rivers Act. The Middle Fork is wild in another sense, as anybody who has tried rafting or kayaking on it will quickly point out.

Wild residents of the Great Bear include mountain

goats, elk, moose, wolverines, lynx, eagles and others. The endangered Rocky Mountain wolf has been reported, but its presence is, as yet, unconfirmed.

The name "Great Bear" comes from one of the area's most notable residents, the grizzly. Indicating the importance of this area to the big bear, the U.S. Fish and Wildlife Service, under the Endangered Species Act of 1973, recently suggested the entire Great Bear be classified as critical habitat for the threatened grizzly bear.

Guided pack stock trips—big game hunting, fishing and sight-seeing—probably represent the major use of the area. Schafer Meadows, a major administrative site within the area, is served by a backcountry airstrip. Recreationists often fly in for float trips, hunting, fishing or hiking. (Wilderness designation, should it ever come to the Great Bear, may allow the Schafer Meadows airstrip to continue to operate.)

Since the area is so vast and diverse, it has many management conflicts and opportunities. For example, Citizens for the Great Bear, a Flathead area group, want wilderness designation for the entire study area. On the other hand, others hope to develop all or parts of the study area. The Bonneville Power Administration is interested in a major power line corridor through the study area. Oil and gas lease applications are pending on more than 200,000 acres of the Great Bear. The Forest Service (FS) has inventoried 90,000 acres of commercial forest with an estimated yield of 11 million board feet.

The FS has released a draft plan with recommendations for a 393,000-acre Great Bear Wilderness Study Area. The agency has recommended against wilderness designation in large parts of the Great Bear to accommodate logging, oil and gas exploration and a power line corridor.

For more information, write John Emerson, supervisor, Flathead National Forest, Box 147; Kalispell, MT 59901 or to your Congressional delegation.—*Rick Trembath*

Rocky Mountain Front

SOUTH OF GLACIER National Park and west of Great Falls, Mont. lie some of the most spectacular, wild mountains in Montana. The portion known as the Rocky Mountain Front contains peaks rising to 9,392 feet and valleys that dip to less than 4,500 feet.

The striking topography of the rugged mountain range is characterized by north-south reefs with sheer cliffs on the east faces rising hundreds, sometimes thousands, of feet from the nearby plains. The canyons between the reefs are narrow and form a trellis drainage pattern highly uncharacteristic of most mountain ranges. Major drainages include the North Fork of the Dearborn, Sun and Teton rivers; Birch and Badger creeks, and the South Fork of the Two Medicine River.

Climate is severe with 20-65 inches of precipitation each year, about 80% of which falls as snow. Strong winds are common. In winter and spring, they often gust to 50-60 miles per hour, with peak gusts over 100 miles per hour. On sites exposed to "chinook" winds, the snow blows into drifts, leaving bare, exposed ridges with forage available to big game. Because of the drying action of the winds, relatively low precipitation in many areas and permeable rocky soils, subalpine and Douglas fir; spruce, and limber, whitebark and lodgepole pine often exhibit stunted, gnarled and wind-deformed branches with trunks of little value for timber.

Wildlife abounds. Few places can boast greater diversity or population sizes. Big game found in the area includes elk, moose, mule and white-tailed deer, bighorn sheep, mountain goats, grizzly and black bears and mountain lions. Particularly noteworthy are the large elk herds, the bighorn sheep population—one of the largest in the nation—and the relatively abundant grizzly bears, presently listed as a threatened species in the lower 48 states. Game birds include the following grouse species: blue, spruce or Franklin's, ruffed and an occasional sharptail. Animals relatively rare in most regions of the United States but still found here include the wolverine, lynx, river otter, pine marten, hoary marmot and Rocky Mountain wolf, which is listed as endangered.

Many common species are found in the Rocky Mountain Front, including beavers, mink, badgers, bobcats, coyotes, pine squirrels, Columbian ground squirrels, pikas, yellowbelly marmots, weasels, cottontail and snowshoe hares and many smaller animals.

Birds are abundant, ranging in size from large raptors such as the golden eagle to tiny hummingbirds which dart about almost too fast for the eye to follow. The steep cliffs provide nesting habitat for golden eagles, prairie falcons, swallows and others. Common fish species found in the major drainages include rainbow, brook and brown trout and whitefish.

Although there is no clearly defined wilderness proposal for the Rocky Mountain Front, the Forest Service's planning unit contains over 450,000 acres of roadless land outside the already established Scapegoat and Bob Marshall Wilderness areas which border the Rocky Mountain Front. Over 500 miles of trails serve the area. Only about 40 miles of roads on the entire Rocky Mountain Front are open to automobiles; an additional 70-80 miles of roads are passable only by all-terrain vehicles or, in some cases, by four-wheel drive vehicles. The latter roads mostly resulted from oil and gas exploration ac-

tivities in the 1950s and '60s. Many have been severely eroded, particularly by the floods of 1964 and '65 and thus have been closed to vehicles.

Over 500,000 acres of oil and gas lease applications blanket the Rocky Mountain Division of the Lewis and Clark National Forest outside the boundaries of the Bob Marshall and Scapegoat wildernesses. Additional applications also cover sizeable acreages inside the Scapegoat, Bob Marshall and proposed Great Bear wilderness areas. Bureau of Land Management holdings in the area also have thousands of acres of pending leases. Leasing activity has been accelerated in the area because of major finds in Alberta, Utah and Wyoming on land with similar geological characteristics.

For more information, write Ken Weyers, supervisor, Lewis and Clark National Forest, Box 871; Great Falls, MT 59403.—*Bill Schneider*

Charles M. Russell Wildlife Range

THE 1,007,756-ACRE Charles M. Russell National Wildlife Range (CMR) is far removed from the main courses of human activity. Only two major roads transect its 125-mile length and fewer than a dozen bladed dirt roads wend their way through this vast prairie scene.

With the exception of Fort Peck Dam and the remote free-flowing Missouri, the CMR is not on the way to, near or next to any other national or Montana attraction. The nearest settlements are old Montana: Zortman, Sun Prairie, Wheeler, Fort Peck, Jordan, Brussett, Cat Creek, Bohemian Corners. The 1,600-mile shore line of Fort Peck Reservoir has only five good places to launch a boat and only two dependable sources of motorboat fuel. Food, fuel, lodging, bait and help are often a long way off.

As big as the CMR is, it becomes even bigger when you get to it, for it's tied to and largely unfenced from equally large tracts of public domain administered by the Bureau of Land Management (BLM) and smaller private holdings. Also, it is contiguous with the 46,254-acre UL Bend National Wildlife Refuge and the recently protected 149-mile Wild and Scenic portion of the Missouri River.

The CMR contains a 30-mile stretch of the free-flowing Missouri, all of Fort Peck Reservoir and sections of rolling grass land that run unobstructed to a 180-degree sky. There are relict areas used infrequently because of rugged terrain and lack of water; unbelievably eroded and inhospitable badlands; fragile timbered areas with stunted ponderosa pine, Douglas fir and juniper; alkali flats; greasewood bottoms, and shale outcrops that have denied even a wildflower for thousands of years. The area supports over 330 species of trees, shrubs, grasses and wildflowers. Its soils contain Cretaceous fossils, the massive bones of dinosaurs and the miniature remains of early mammal forms that failed. One feels the spirits of the now extinct plains grizzly, prairie wolf, Audubon's bighorn sheep and the free-roaming bison. The CMR also contains some of the richest and some of the poorest grass lands in the state, many long views and some of the most peaceful and quiet places on earth. Clear nights on the CMR are a breathtaking and humbling experience.

The number and variety of wild animals on the CMR are the equal of any place in Montana. Within the CMR's boundary, 231 birds (86 nesting species) 43 mammals and 41 different fish have been observed. Fort Peck Reservoir harbors the largest known surviving specimens of the primitive paddlefish. The north and west "breaks" country is the home of one of the few prairie elk herds in the country. (See "Elk in the Missouri River Breaks," *Montana Outdoors,* Sept./Oct.1975.) CMR has over 4,400 acres inhabited by prairie dogs in more than 58 separate towns. The prairie dogs, in turn, provide conditions favoring close to 30 other species of wildlife.

The area is a feeding and resting site for thousands of migrating waterfowl (27 species) and serious bird watchers will note that the CMR is the only place in Montana where the ivory gull, great black-backed gull and the scissor-tailed flycatcher have been observed. It is also one of the few places in Montana regularly reporting snowy owls, gyrfalcons and prairie and peregrine falcons.

In 1969, the U.S. Fish and Wildlife Service began assessing the wilderness potential of the CMR. Since, there have been several proposals, involving various amounts of land. The basic idea was to protect the most remote, wild and scenic areas, yet permit and even facilitate grazing use and visitor access. Since most of the area is without natural sources of potable water, it doesn't as readily lend itself to extended backcountry camping, cross-country hiking or horse camping as do the mountain areas. Clearly, it is a different sort of wilderness concept.

Some local opposition arose over wilderness status, especially from livestock interests. There is confusion, misunderstanding and apprehension over just how a wilderness area will be managed. Consequently, wilderness status for the CMR was, and still is, emotionally charged and politically sensitive.

It will probably be several years before this issue is resolved. Few of the parties interested are satisfied with the current proposal. The BLM now has authority to establish wilderness areas on public land outside the CMR and this may stimulate a new round of discussion.

For more information, write Larry Calvert, refuge manager, Charles M. Russell National Wildlife Range, Box 110, Airport Road; Lewistown, MT 59457. Also, watch future issues of *Montana Outdoors* for a more comprehensive article on the CMR.—*Mike Aderhold*

Spanish Peaks

THE SPANISH PEAKS Primitive Area remains without a wilderness classification, even though the Forest Service (FS) recommended in 1967 that the 47,923-acre primitive area, plus 15,377 contiguous acres, be added to the National Wilderness Preservation System. Situated about 35 miles southwest of Bozeman, up the Gallatin Canyon, the area harbors a wide range of wildlife—bighorn sheep, elk, moose, mule deer, mountain goats, black bears and others.

The reason for the continuing delay is the Jack Creek drainage south of the existing primitive area, a critical piece of undeveloped landscape that links the primitive area with the remainder of the wild Madison range. Jack Creek, the FS concluded in its study, had wilderness qualities, but the alternate sections of Burlington Northern Inc. (BN) land made the area unavailable for wilderness at that time. Nevertheless, continued support exists for inclusion of the Jack Creek drainage—which is, incidentally, also quality wildlife habitat—with a Spanish Peaks wilderness. As a result, Congress has found itself unable to resolve the Jack Creek dilemma when faced with competing Spanish Peaks wilderness bills.

Several events have occurred since the 1967 FS wilderness study of the Spanish Peaks area that may affect the final outcome. When the FS originally considered the wilderness potential of the Jack Creek drainage as a possible addition to the Spanish Peaks wilderness recommendation, the extra value as the connecting link with the rest of the Madison range was not considered. (See the article on the Taylor-Hilgard proposal elsewhere in this section.) Recently, however, the value of Jack Creek as a key link has been elevated and made clear by passage of the Montana Wilderness Study Act (S 393) and the guarantee of wilderness study for the Madison range. The act excludes Jack Creek.

Therefore, the potential for wilderness adjacent to and south of Jack Creek is greater than in the past. Jack Creek alone becomes the critical segment which will determine whether the Madison range, including the Spanish Peaks, will be joined as one wilderness or if the area will be separated by a Jack Creek corridor.

Other events have occurred since 1967, including establishment of the Big Sky resort and renewed interest in land exchanges. Big Sky did not exist when the wilderness study was performed. This large development lies adjacent to both the existing Spanish Peaks Primitive Area and the Jack Creek drainage. Resource decisions made today in the area will undoubtedly consider the implication of this nearby development on adjacent public lands.

BN and the FS have recently agreed to begin exploring land exchange possibilities. As previously mentioned, the presence of private land in Jack Creek was the primary reason the FS originally rejected Jack Creek from its Spanish Peaks proposal. Thus, exchanges could remove this problem.

After years of inaction, it now seems the Spanish Peaks proposal is moving to the forefront. Sen. Lee Metcalf (D-Mont.) has given high priority to the Spanish Peaks in the upcoming session of Congress. The chief of the FS has asked local FS officials to re-evaluate, as soon as possible, their original position on the Spanish Peaks. The Montana Board of Natural Resources and Conservation has decided to approve Jack Creek as the preferred route for a transmission line to Big Sky.

All these actions will soon force a decision on the Spanish Peaks wilderness, the Jack Creek addition and whether the Madison range may become a single wilderness.

Watch for introduction of Sen. Metcalf's Spanish Peaks wilderness bill and ensuing Congressional hearings.—*Frank Culver*

Taylor-Hilgard

THE MADISON RANGE is high country with a soul. Extending some 75 miles from the Spanish Peaks Primitive Area near Bozeman, south to Hebgen Lake on the western edge of Yellowstone National Park, the Madison range is home to a far-ranging population of threatened grizzly bears. Rugged 11,000-foot peaks jut skyward from this pristine range, while alpine lakes nestled between them provide refuge for grizzly and black bears, mountain goats and bighorn sheep. The beautiful, clear lakes also contain colorful cutthroat trout. Below this alpine area, meadows, forested slopes and rushing, crystal streams offer sanctuary for the bears, elk, moose, deer and the many other wildlife species that abound there.

The Spanish Peaks has been recognized for its striking wilderness qualities since 1932 when it won designation by the Forest Service (FS) as a protected primitive area. But the mountains to the south have never enjoyed such protection. Now that area is faced with proposals for power lines, roads and other developments.

The 289,000-acre Taylor-Hilgard is one of nine areas mandated for wilderness study by the recent passage of S 393, Sen. Lee Metcalf's (D-Mont.) Montana Wilderness Study Act. The Taylor-Hilgard is interwoven with private land, much of it owned by Burlington Northern Inc. (BN) which received it as Congressional land grants in the 1860s. These holdings and other private land adjacent to the national forest are objects of increasing development pressure. Location of the Taylor-Hilgard, situated in

Rocky Mountain Front. photo: Gus Wolfe

an area known for its blue ribbon trout streams, scenic grandeur, clean air, wildlife and wilderness qualities, intensifies this pressure. One major resort, Big Sky, already has capitalized on those qualities.

Now Big Sky's sponsors—which previously included the Montana Power Co. (MPC) and BN—claim the 10,000-acre, year-round, all-electric resort needs more power than that supplied by the existing 69-kilovolt (kv) transmission line running through Gallatin Canyon. Saying that skiers might be left dangling from ski lifts unless additional electricity is supplied, they are promoting a new 161-kv line to cut from the west to Big Sky across the unprotected roadless mountain country, a small part of which is already under FS study for possible addition to the National Wilderness Preservation System. The addition includes Jack Creek, one of two suggested routes. The route proposed by MPC would follow Cedar Creek, a drainage included in the proposed Taylor-Hilgard Wilderness Study Area.

In a draft management plan for the Beaverhead National Forest, which includes the west slope of the Madison range, the FS slated more than 400,000 acres of roadless or essentially roadless land in the forest for future timber harvesting and other development. Included was about a third of the Jack Creek drainage. The plan also noted, "If carefully located, a power line could be made compatible with the proposed management in the drainage."

Besides questioning the *need* to increase electric service to a luxury resort, wilderness advocates such as Bob Kiesling, staff coordinator of Helena's Environmental Information Center, are concerned "that no corridor be chosen which would legally alter the wilderness character" of the area between Big Sky and the Madison Valley across the Madison range to the west.

Just south of Big Sky, in the east central portion of the proposed wilderness study area, BN has asked the FS for a special use permit to build two logging roads in the Buck Creek and Yellow Mules drainages to gain access to presently unharvested timber on BN land. Although BN's holdings lie within an area allegedly protected as part of a "hold" unit and known to be replete with unstable soils, the FS says it has no choice but to grant the roading permit.

"We simply have to grant these owners the right of ingress and egress," asserts Gallatin National Forest Supervisor Lewis E. "Gene" Hawkes. The FS defends its proposed action by citing the agency's Organic Act of 1897, manual, regulations and policies. The Montana Wilderness Assn., Montana Wildlife Federation and others have filed an administrative appeal hoping to overturn this decision.

Sen. Metcalf has noted that the FS could rewrite the manual, regulations and policies if it chose to do so and could also recommend revision of the Organic

Scotchman Peaks. photo: Lance Schelvan

Act to provide proper protection of the public interest, if that actually is necessary. Further, Rick Applegate of the Center for the Public Interest in Bozeman cites possible legal precedent which could be used in a court case to avoid removing Congress' option to classify the lands after overall study.

At the southern tip of the Madison range and the proposed Taylor-Hilgard study area, developers are promoting plans for another massive year-round resort—Ski Yellowstone, named after the nearby national park. The FS has tentatively approved the application for a special use permit to place 13 ski runs, 10 chairlifts, a gondola, roads and a day center atop 8,721-foot Mount Hebgen. This FS decision is also under administrative appeal.

The project's immediate proximity to the proposed wilderness study area and its adverse implications for grizzly habitat, which extends from Yellowstone Park through the Madison range, have worried many wildlife and environmental groups. This habitat is currently under study by an interagency task force comprised of personnel from the FS, National Park Service, U.S. Fish and Wildlife Service, Montana Dept. of Fish and Game and other agencies.

For more information about the Ski Yellowstone proposal and the Buck Creek-Yellow Mules road permit, write Lewis E. "Gene" Hawkes, supervisor, Gallatin National Forest, Box 130; Bozeman, MT 59715. For additional information on the power line corridor from the west to Big Sky, write Hawkes or Robert W. Williams, supervisor, Beaverhead National Forest, Box 1258; Dillon, MT 59725.—*Robin Tawney*

Absaroka-Beartooth

THE ABSAROKA-BEARTOOTH lies in south central Montana, roughly in the vicinity of Billings, Livingston, Gardiner and Red Lodge. Yellowstone National Park and the Beartooth Highway form the southern edge. On the west and north, the Yellowstone River flows and on the east, the Clarks Fork of the Yellowstone.

Nearly a million acres in size, the Absaroka-Beartooth boasts an ecological diversity found in few other places in Montana. The vast Beartooth Plateau, America's largest continuous landscape,

rises more than 10,000 feet. At the crest is Granite Peak—Montana's highest at 12,799 feet— and some 20 other named and unnamed peaks over 12,000 feet. The Beartooth is a splendor of rock, ice, snow and water—a beautiful yet stark mountain mass.

Here, too, is the gentler Absaroka with its long valleys, meandering streams and pleasant peaks. Here are the high, lush meadows, which, in conjunction with the forested slopes, support abundant wildlife. Elk, deer, bighorn sheep, mountain goats, moose, grizzly and black bears and many smaller species of birds and mammals may be seen.

The Forest Service (FS), mandated by the Wilderness Act of 1964, began its review of the Absaroka and Beartooth Primitive areas in 1969. Included in the study was 273,000 acres of contiguous wild land, in addition to the 64,000-acre Absaroka Primitive Area and the 230,000-acre Beartooth Primitive Area. Notably, 43,000 acres in the Cedar-Bassett-Six Mile area near Gardiner, Mont., and the 250,000-acre North Absaroka area near Livingston, Mont. were not included in the study, allegedly because of the inability of the Dept. of the Interior to complete the mineral survey.

A 1972 FS report presented several alternatives, ranging from the so-called "maximum wilderness" alternative (which actually included only about half the suitable wild land) to declassification of the Absaroka Primitive Area. The draft, published in February 1974, proposed three separate wildernesses: an Absaroka, a Beartooth and a Cutoff Mountain. If enacted, this proposal would have perforated the *de facto* wild land with corridors into Slough Creek drainage, which would allow mechanized development.

At hearings in Cody, Wyo.; Billings and Livingston, the public overwhelmingly endorsed the unity of the Absaroka-Beartooth and called for the FS to abandon its fragmented proposal. The agency saw no other choice. In July 1974, the FS and the Dept. of Agriculture recommended wilderness classification for a 542,437-acre Beartooth. In the proposal, the Absaroka and Beartooth were united.

In the minds of some wilderness advocates, however, the FS proposal was inadequate. It deleted the 46,000-acre High Lakes area, an extension of the Beartooth Plateau into Wyoming. It failed to recommend 68,000 acres of wild land in the Crevice, Bear, Bassett, Cedar and Six Mile creeks drainages on the west side of the unit. And, it didn't recommend the North Absaroka, *despite the highest wilderness quality index among the roadless areas of the national forest system.*

Spearheaded initially by the Absaroka-Beartooth Task Force and recently by the Montana Wilderness Assn., conservation interests have proposed wilderness designation for all suitable land in the Absaroka-Beartooth. Gov. Thomas L. Judge and the Dept. of Fish and Game have recommended the expanded area. Originally advanced in 1970, this proposal has evolved through minor changes into the current proposal for a 960,000-acre Absaroka-Beartooth wilderness. This plan has been endorsed by over 30 local, state and national organizations.

Even with public support and few resource conflicts, this Absaroka-Beartooth bill didn't sail through Congress. Controversy erupted when Park County officials discovered evidence from 1893 which suggested that a right-of-way road existed between Cooke City and Independence, Mont. Such a right-of-way through the Slough Creek corridor would split the Absaroka from the Beartooth, destroying the unity of the wild land. An FS legal opinion holds that the county did not perfect its dedication; therefore, the U.S. government maintains jurisdiction over the supposed right-of-way. Not agreeing and fearing a precedent whereby the federal government might use legal technicalities to subvert county rights in other areas, Park and Sweet Grass counties have sued in federal district court. It is unclear when this litigation will be resolved.

Technically, the suit should have no bearing on wilderness legislation. Assume Congress passes a wilderness bill which includes Slough Creek. If the counties lose the suit, then the issue is settled and jurisdiction clearly lies with the federal government. If the counties win the suit, then their jurisdiction is established. But the Wilderness Act allows non-federal rights inside a wilderness. The counties could presumably exercise their rights to actually use the corridor for a road. Or, they could abandon their right. After all, the road itself is not the central issue to the Park County Commissioners; the jurisdiction issue is. The commissioners have held they have no interest in building and maintaining a road.

Sen. Lee Metcalf (D-Mont.), a supporter of wilderness designation for the Absaroka-Beartooth, has introduced S 1671 which conforms with the wilderness supporters' proposal (except for the Wyoming portion of the bill which was deleted at the request of Wyoming Republican Sen. Clifford Hansen). Action is expected this session of Congress.

For more information, write your Congressional delegation.—*Bob Anderson*

Elkhorn

THE ELKHORN wilderness encompasses a relatively small acreage as far as Montana wilderness areas go, with a maximum proposal of less than 90,000 acres. Until a controversy arose over a Forest Service (FS) plan to develop the area, this scenic section of Montana was relatively unknown. Now, it probably has as much public support as any other Montana wilderness proposal. Certainly, its proximity to the triangle formed by Bozeman, Butte and Helena increases its popularity.

The area receives heaviest use during the hunting season, which reflects its quality wildlife habitat. Elk, mountain goats, moose, black bears, deer, mountain lions and many other wildlife species flourish in the Elkhorns. The area is also popular with hikers, mountain climbers, anglers, backpackers and other recreationists.

Vocal support from virtually all facets of society, including the Helena Chamber of Commerce, for an Elkhorn wilderness has been reinforced by the FS' lack of response to this clear-cut public mandate. Through every step of the FS land use planning process, the majority opinion supported leaving the Elkhorns unroaded. Nonetheless, the FS published a final land-use plan in June 1976 calling for extensive roading and development in the Elkhorns. Over 90% of the public comments on this plan objected to the proposed development.

This raised the public's ire so much that Sen. John Melcher (D-Mont., then a U.S. Representative) conducted a precedent-setting Congressional hearing in Helena—the first time such a hearing has been conducted on a local land use plan. After finding overwhelming support for wilderness classification at this hearing and additional support through other public input, Sen. Melcher removed the Elkhorns from the Montana Wilderness Study Act (S 393) and Congress subsequently made it a special study area.

However, the sincere public demand for a wild Elkhorns area still sounded like a voice crying in the wilderness to those making land use decisions. After more than a year of detailed study, the forest supervisors from the Helena and Deerlodge National forests recommended no wilderness for the Elkhorns, according to a report published in the Great Falls Tribune.

For more information, write William Gee, supervisor, Helena National Forest, 616 Helena Ave.; Helena, MT 59601 or the Elkhorn Citizens' Committee, P.O. Box 12; Helena, MT 59601.—*Bill Schneider*

McGregor-Thompson

SITUATED 32 MILES west of Kalispell, Mont., the McGregor-Thompson is the largest of roughly 30 roadless parcels of land administered by the Forest Service (FS) west of Flathead Valley. The undeveloped area is five miles wide and extends south from the shore of McGregor Lake for 23 miles. Much attention has been focused on this area because it is one of the largest blocks of uncut, unroaded forest in Montana.

This land of deep, forested canyons and rolling, high country is administered by two national forests: Kootenai on the north and Lolo on the south. The land ownership pattern of the McGregor-Thompson is complex. While the southern portion is national forest land, the northern half has checkerboard ownership, with Burlington Northern Inc. the principal private owner. Of the total 85,200 acres proposed by Friends of McGregor Lake (a Flathead area group opposed to further development in the McGregor-Thompson) for wilderness classification, 73.2% is federally administered, 25.5% is private corporate and 1.2% is state owned.

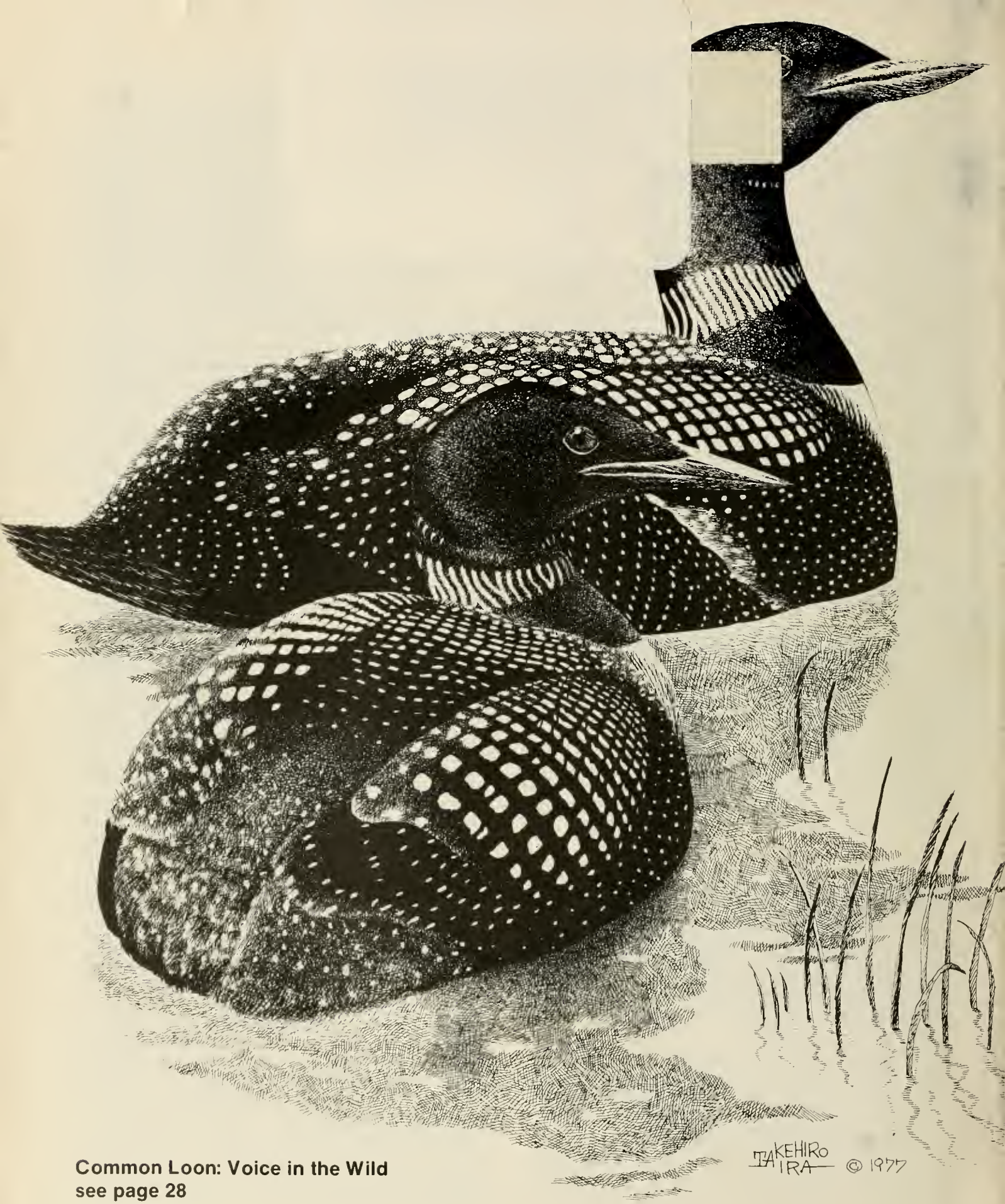
The total area inventoried by the FS for wilderness study is 87,040 acres. If it could be acquired, an additional 3,000 acres of private wild land, probably suitable for wilderness classification, exists outside and adjacent to the Forest Service land on the west side of the area.

The view from U.S. Highway 2 on the north shore of McGregor Lake is a reminder of what much of western Montana was like before timber cutting and other development. It is a gentle area, particularly suited to family and day hikes. It offers fine fishing, especially for rainbow-cutthroat hybrids and eastern brook trout; huge, old trees; cool, rocky canyons, and an opportunity for seclusion. The combination of canyons, ridges and high, rolling topography is arranged in such a way as to provide interesting and unforgettable backcountry experiences. The chances of seeing wildlife are good if one is quiet and observant. Species commonly observed are black bears, elk, moose and white-tailed and mule deer. Plant succession in all stages of development and variation may be found and in one, six-square-mile area near Chippy Creek, 14 different species of evergreen flourish. The combinations of successive stages and patterns are varied and interesting and each bend in the trail offers a new experience.

The Friends of McGregor Lake petitioned sponsors of the Endangered American Wilderness Act of 1977 to include this area as a wilderness study area. Meanwhile, the FS recommended the area become instant wilderness. The area was eventually dropped from the bill by the Committee on Interior and Insular Affairs in July 1977, without prejudice, so that it could instead be reviewed under the FS' Roadless Area Review and Evaluation (RARE II). (RARE II is a repeat of a national inventory of remaining national forest roadless lands that could be candidates for wilderness designation.)

Then, the FS changed its mind and asked that the area not be recommended for instant wilderness. In the interim, the area is protected only from proposed logging sales on national forest lands. But if McGregor-Thompson were dropped from RARE II, logging and development would be imminent.

For more information, write Floyd Marita, supervisor, Kootenai National Forest, Box AS; Libby, MT 59923 or Orville Daniels, supervisor, Lolo National Forest, Building 24, Fort Missoula; Missoula, MT 59801.—*Roderick Barcklay* ■



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